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REGULAR COMMUNICATIONS.

HYDROPHOBIA VERA, WITH REPORT OF A CASE.

BY JAMES I. TUCKER, A. M., M.D.

[Read before the Chicago Medical Society, May 16th.]

During my student years, from 1863 to 1867, the prevailing doctrine in this country seemed to be that there was no such disease as hydrophobia vera—*i. e.*: a disease due to the inoculation and subsequent prolification of germs of a specific animal-poison which resides in the altered saliva of rabid animals, or, to omit the pathological clause and adopt the definition of Reynolds,* a disease due to a specific animal-poison which resides in the saliva of animals affected with it. This doctrine, I believe, is at the present day very generally held in medical circles. Just now, when the experiments of Pasteur are attracting world-wide attention, and giving rise to heated controversy, every ray of light that can be thrown upon this interesting subject is timely and appropriate. That there is a specific disease caused by the saliva of a rabid

*System of Medicine, vol. 1, p. 711.

animal I have no longer a particle of doubt, or the case which I am about to report has not the importance which I attach to it.

A few years ago I was frequently called to attend a Swedish family residing on Waupanseh avenue, now Thirty-seventh street, in this city. I never entered the house without being greeted with brutal courtesy by a snarling cur. The assurance from his master: "The dog is harmless; he barks but never bites. Down, Tiger!" was an incentive to duty, but hardly sufficient to allay my apprehensions. I did not feel so sure that the dog would not bite, and I was glad enough to get out of the house. Finally the family moved away and I heard no more of them for some time afterward.

One morning about 5 o'clock, Dr. Flavius M. Wilder* called at my office and asked me to go and see a patient with him. I got into his buggy and we drove to Langley avenue. On the way the doctor asked me this question: "Is there, in your opinion, such a disease as hydrophobia?" I replied that the question was still unsettled in my mind; that I had never seen a case and had been taught that the disease commonly called hydrophobia, notwithstanding its classical history and high modern authority, was a form of acute mania with the characteristic delusions and hallucinations.

We entered a cottage and saw lying on a bed the Swede whose family I had attended on Thirty-seventh street a year or two before.

He was rational, but his physiognomy denoted extreme anxiety. His eyes were more brilliant than usual; his pulse rapid and jerky; his tongue coated and dry; he expectorated forcibly from time to time a viscid phlegm, and I observed

* Whose permission was obtained before I wrote this paper.

that his neck was badly scratched, and on uncovering his chest that the skin was lacerated in a horrible manner. Dr. Wilder informed me that the patient had done this with his finger nails during the paroxysms. I was curious to know what these paroxysms might be. Accordingly I went to a cupboard, took therefrom a glass and drew some water into it. Into the water I put a few drops of a tincture. We raised our patient up and requested him to take a couple of teaspoonfuls of this medicine. As soon as he attempted to swallow the first teaspoonful, there followed a paroxysm of dysphagia which it would be difficult to describe. It consisted, in brief, of a dysphagic constriction of the pharynx and œsophagus, in the hope of relieving the agony of which he had torn the flesh from his throat and and chest. This paroxysm was only one of a series which the attending physician had been observing, and which had led him to diagnosticate the case as one of *rabies canina.* Shortly after the patient had another paroxysm, which caused him such extreme suffering that he sprang from his bed, leaped from the window into the garden, and, clad only in his night-shirt, rolled in the dust. Upon being calmed down he exclaimed: "I have dog-disease! It can be none other! It is incurable! It means death. I want you, doctors, to give me something to terminate my life speedily, that I may not suffer unnecessarily!" Thereafter, I am told he made attempts to destroy his life by opening the radial arteries with a needle. Paroxysm after paroxysm, increasing in frequency and intensity, marked the further progress of the disease, and on the following morning after I saw him he died, either from exhaustion or asphyxia—which I cannot say, for he was then unattended except by his family. The intervals between the paroxysms were lucid and rational. He told his wife what

to do after his death. He told me that he had been bitten six months before by the same "innocent" cur which he had assured me "barked only, but did not bite." That the cur had been immediately thereafter killed. He attached no importance to the bite till two weeks before we saw him, when, upon going to the lake to bathe he experienced a peculiar constriction about the throat and returned. On the following evening he tried the experiment a second time, and again felt the sensation of constriction. Upon returning he became feverish, the constrictions became more and more frequent and severe, and he directed his wife to send for a physician. If we had not been pre-occupied at the time, we would doubtless have paid closer attention to the more remote phenomena of the disease. We would have looked for the peculiar swellings of the tongue known as *lyssi*, for general hyperæsthesia, exaltation of special senses, priapism, etc.; but, as it was, our attention was absorbed by the observation of the gross appearances. Treatment was ineffectual except as a palliative.

To recapitulate: 1. The man was bitten by a dog, which was immediately thereafter killed; not because he was supposed to be mad, but because his master was angry with him. There was, therefore, no suspicion or dread of hydrophobia.

2. The dog was a sullen, snarling cur, which so many foreigners keep about them as a body-guard. It was unwise to kill him, for it was sacrificing the principal witness.

3. The idea of the biting, and the thought of hydrophobia, did not occur to our patient until the symptoms unmistakably manifested themselves.

4. The difficulty of deglutition was caused, first, by the *sight* of water; second, by the *attempt to drink* water; third,

the disease fully developed, the spasms occurred independent of either provocation. There was extreme thirst.

5. The paroxysms, consisting principally of constriction of the pharynx and œsophagus and unexplainable from any other standpoint, psychical or neurological, were almost pathognomonic.

6. Between the paroxysms, there were distinct intermissions, during which the mind was lucid and rational.

7. Rabies confirmed, the phenomena were unmistakable to the physicians and justified the grave suspicions of the patient.

8. No treatment mitigated the symptoms or forefended the result.

9. He died on the morning of the fourth day.

So far as we know at present the prognosis is of the worst description. Death is inevitable. I have not received evidence to convince me of the efficacy of Pasteurization.

It is somewhat remarkable that, if the disease is as common as is popularly supposed—a supposition which the Pasteur inoculations would seem to countenance—how few physicians seem to have seen a single case! In an uninterrupted practice of nearly a quarter of a century I have seen only one case. I have witnessed lyssaform mania, and tetaniform dysphagia and a number of cases of pseudo-hydrophobia, to which the secular press is so fond of giving a sensational coloring, but never before have I seen hydrophobia vera; the symptoms of which are, nevertheless, so unique that no one in the daily habit of practical differential diagnostication can possibly mistake them.

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EDITORIAL.

PHOTOGRAPHY AND MEDICINE.

The remarkable advances made in many of the arts as a consequence of the adaptation of photography to their needs, has been fully equaled by the extent to which science—and especially medical science—has profited in the same direction. It is not alone in conjunction with the re-production of the field exhibited by the microscope that the value of photography has thus been demonstrated. Every department of medicine and surgery is now daily enriched by valuable concontributions made to the great storehouses of anatomy, histology, and pathology.

It is not only the teacher of medicine, but the student and the practitioner who are enjoying the fruit of this adaptation of one art to the requirements of another. What serves the one must, in the long run, greatly serve the other.

To-day all the facial expressions of disease of the internal organs are re-produced by the photograph; all the postures of hysteria; all the external manifestations of insanity. In surgery all the fractures, dislocations, and deformities are similarly reproduced. In one of the largest of the Philadelphia hospitals a camera has been arranged so as to secure accurate representations of persons suffering from shock, as the victims of accident are brought in on litters into the proper wards. In several of the medical schools the entire course in midwifery is illustrated by photographic representations. In diseases of the skin, though confronted with the almost *insur-*

mountable difficulty incident to the representation of colors, something has been done in the way of accurate illustration.

The object of calling attention to these facts, whose importance is rapidly increasing, respects the value to the physician of a practical acquaintance with the art of photography. There are few photographers limiting themselves to the popular demands upon their skill, who can satisfactorily accomplish what is required by the physician. The very best photographs of medical subjects have been taken by medical men. The degree of skill acquired by the latter in this particular field has been what we should expect of the man whose education is of the character to prepare him for such work. One of the busiest of the best-known physicians in this country was first to photograph successfully last year the flash of lightning. Some of the most artistic of the photographs of anatomical preparations have been also taken by physicians—not by those merely who have devoted themselves particularly to such work, but by practical men occupied daily with their professional duties.

The active practitioner, who has but little time for the recording of his interesting cases in writing will find here a field that will reward him for the small time required to cultivate it. No man has so excellent a record of the interesting features of a case of any disease that can be represented by a photograph, as that furnished by the camera. The modern methods of photography have been so simplified and improved, that the best artistic results are now within the reach of all.

CHEST MOVEMENTS OF RESPIRATION IN THE INDIAN FEMALE.

A report of some investigations into the subject of respiratory chest movements of Indian females, published by Dr.

Thos. J. May, in the *Therapeutic Gazette, May 16, 1887*, seem to indicate that the costal respiration in the civilized female is a purely artificial result. The examinations were made by means of a pneumograph, modified by the examiner, constructed on the model of that of Paul Bert. The subjects of the investigation were eighty-two Indian girls in the Lincoln Institution, and in each case both a costal and an abdominal tracing was taken. Thirty-three of the girls were full-blooded Indians, five one-fourth, thirty-five one-half, and two three-fourths white. Seventy-five showed a decided adominal type of breathing, three a costal type, and three in which both were about even. The author states: "In no single instance did the full-blooded Indian girl possess the costal type of breathing."

As the author suggests, the result of these investigations throws suggestive light upon what may perhaps be termed the transcendental physiological speculations of Boerhaave, Huller, Hutchinson and their many disciples.

The author further raises, and partly discusses, the question: Does this fact of the abdominal breathing among Indians, with its possible relative apex inactivity, account for the very great mortality from pulmonary tuberculosis among those tribes which have most recently come in contact with civilization? and also, what is the influence of such abdominal constriction, as is practised by our civilized female, upon the function of respiration, and upon the fact that a relatively smaller number of females die of pulmonary tuberculosis? The article from which these remarks are very freely quoted is accompanied by tracings which show in a striking manner the facts claimed, and is worthy of consideration.

FOREIGN CORRESPONDENCE.

NOTES FROM A LONDON CLINIC.

LONDON, ENGLAND, April 15th, 1887.

Special Correspondence of The Chicago Medical Journal and Examiner:

I send you herewith some notes of cases treated by Sir Joseph Lister. In a case of nævas in a child four months old, in the operating theater of King's College hospital, he stated that the mother of the child said that at birth the nævus was a mere speck. In the short period since the child's birth it had grown to the size of three inches both in breadth and length. It was situated behind the angle of the jaw on the right side, covering the entire sterno-cleido-mastoid to within half an inch of the scapula. The extremely rapid growth of the tumor called, in the opinion of Sir Joseph, for surgical interference, although, as he stated, he could not feel certain that it could be successfully removed.

Further delay, however, if the nævus continued to increase in size as it had done, he said, would soon prove fatal. The patient being anæsthetized, the parts about the growth were cleanly shaven, and a towel wrung out of carbolized water, on which the instruments were placed, was at hand. The operator then made an incision into the healthy tissues about four lines beyond the margin of the nævus and encircling the entire growth. The incision reached to the fascia. The integument was picked up by a forceps and fingers, and the nævus gradually torn from its attachments, the knife being used to divide the tissues when their resistance proved too great for the fingers. The arteries were ligated as they

were exposed, and then cut by scissors. When the growth had been entirely removed, there was left an opening so large that the anterior triangle and the greater portion of the posterior triangle of the neck were exposed.

All bleeding vessels were "picked up" with artery forceps until hemorrhage ceased, and each vessel ligated with silk-worm gut sutures; not more than two teaspoonsful of blood was lost. The wound was cleaned by sponges and carbolized water. Its edges were approximated by sutures of silver wire, introduced in sueh a manner as to cross each other in the shape of the letter X. This necessarily left an opening in the central part of the wound, and at each of its angles. Further approximation of the parts was secured by passing silk-worm gut sutures through those of the wire. Carbolized horsehair was introduced through such openings as remained, in order to secure drainage. Carbolized gauze and other carbolized materials were placed over the wound and the whole secured by a roller bandage, and an elastic linen band applied around the edges of the dressings.

An idea may be formed of the great extent of the wound after the removal of the nævus by stating that nineteen large silver-wire sutures were required to bring the integument into apposition. There were fifteen vessels ligated during the operation, silk-worm gut being used. The operator occupied one hour and fifteen minutes in his work. For some days previous to the operation the tumor had been injected with a solution of carbolic acid. After the growth had been removed, it was examined to see what changes, if any, had been effected in its structure by the carbolic acid. There was found simply a slight change of color in a few places, and a small degree of hardening or condensation of tissue. The nævus measured one and a half inches at its center. The operator stated that

there was little danger of hemorrhage in removing a nævus if the incisions were made some distance from its margin into the healthy integument, tearing away by the aid of fingers and handle of knife where possible. The child was seen by the writer some hours after the operation, and appeared to have fully rallied from it.

Sir Joseph Lister brought to the notice of the writer two patients who had been operated upon seven days previously for cancer of the breast—the last operation being the second performed on one of the patients. The dressings were then removed for the first time. The wounds had healed by first intention. When sutures were removed they were found free from all trace of pus. The patients had no fever.

The "spray," as is now well known, has been discarded by Sir Joseph Lister for some time. The writer was present some twelve months or more ago at a clinic of Sir Joseph Lister, when he called attention to the absence of his "spray," stating that he was then sorry he had ever inflicted the "spray" upon the profession, or words to that effect. He continues to use, and places great reliance upon, his double chloride dressings.

WILLIAM B. MEANY, M.D.

MEDICAL PROGRESS.

HEARING AND THE EXAMINATIONS FOR THE PUBLIC SERVICE.

By W. LAIDLAW PURVES, M.D., *Aural Surgeon to Guy's Hospital.*

A physical defect which does not seem to have received the attention it deserves in the examination of candidates for the different services is that of a deficiency in the normal hearing power. In the case of the eye, any marked imperfection of vision in both eyes generally forces itself upon the observer by the peculiar gait, or position of the head, or closure of the lids, which the sufferer employs to give him his best possible unaided vision. But a loss of hearing power much below the normal, either in both ears or limited to one ear, may escape detection by a careful observer who does not have recourse to more minute methods of investigation for determining the acuteness of hearing. This arises partly from the fact that ordinary conversation is carried on in a much louder tone than is necessary for the proper hearing thereof. With two normal ears the same conversation could be carried on with half the volume of sound, or even in a whisper; and, as the pica or long primer types are employed by the popular publisher to give comfortable and easy reading to eyes much under the normal in acuteness, so does the barrister or lecturer gauge, as far as he can, an intensity of sound which will give his audience easy hearing without straining. But, in the case of the candidate for admission to any of the services, not merely is it necessary for him to have the vision and hearing which can carry him

through the daily avocations of private life, but he ought to have a standard normal acuteness of both organs on both sides. With only one sound and normally acute eye or ear, a man may pass through life without anyone, perhaps even himself, having discovered that he was partially blind or deaf; but he is essentially a one-barrelled man, and his chances of remaining with good vision and hearing during life are about 50 per centum less than those of a man with two normally acute eyes and ears.

Attention has been lately called to a standard of vision which is necessary for entrance to the Indian service, and the non-possession of which ensures rejection. It is, in the opinion of the writer, not less important that a standard of hearing power should be formed for the same purpose. It is indeed probably of greater importance that a fuller examination be made of the aural organ and its acuteness, than of the visual organ and its function. For, as the loss of function by an abnormal refraction—which is the great cause of defect—can be remedied by the use of lenses, and make the candidate as fit, with those lenses, for the service as a candidate with normal refraction, so may the remedy of altered tension and position of the aural conducting apparatus be applied during the medical examination so as to give a normal acuteness of function. But this full perception may not be present a few hours afterwards, and may be concurrent with tissue changes of a kind which should preclude the acceptance of the candidate. The spectacles are apparent to all, and will, as a rule, remedy the defective refraction at all times; but the changed tension, and the means of effecting it, are discoverable only by an expert, and may be used only on the occasion of the pass-examination.

Other conditions may be present in the conducting appa-

ratus, which, though not causing any appreciable changes in the hearing power at the time of examination, which is virtually a test in direct simple conversation only, are liable to increase, and render the candidate unfit for the service. Such are exostosis, or an old callous perforation of the membrane, which, as long as the former does not materially lessen the calibre of the meatus, or the latter effects only slight changes in position, and interferes only in a small degree with the muscular accommodation, can be determined solely by an objective examination of the parts. The exostosis may never increase to such an extent as to block the canal, but a perforation will certainly, at some time or other, lead either to acute mischief, or to an early loss of acuteness for compound sounds.

Unless the examination be conducted in a manner which will ensure the detection of loss of acuteness of function with or without mechanical aids, of irregularities which may continuously or only temporarily interfere with the faculty, and of conditions which predispose to aural disease, it will fail in its intention.

That a set of rules should be drawn up regarding the defects of hearing which disqualify candidates for admission into the services, is the purpose of this paper, so that when the private medical adviser is consulted by the guardians of a proposed candidate, he may be able to inform them as to his possessing the required acuteness of vision and hearing.

That such advice should be sought by all guardians of such candidates before entering them on a lengthy and expensive training, is the warning of the writer.—*Medical Times.*

DIET AND HYGIENE IN THE TREATMENT OF DIABETES.

PROFESSOR C. W. PURDY advises a rigid enforcement of the following diet and hygiene in cases of confirmed diabetes melli-

tus, in which the matter of diet and hygiene is of more importance than medication.

What to Eat.—Fresh meats of all kinds. Meats, salted, smoked, cured, potted, or preserved in any way except with honey or sugar. Poultry and game of every kind. Eggs in every shape. Bread and biscuits made with prepared gluten bran, or almond flour. Fish of every kind, fresh and preserved, except oysters. Soups of all kinds made without flour or prohibited vegetables. Butter, cheese, cream, curds, oil, dripping and suet, green vegetables, summer cabbage, cauliflower, spinach, broccoli tops, Brussell's sprouts, turnip tops, string beans, watercresses, mustard and cress, sauer kraut, the green parts of lettuce, sorrel, mushrooms, celery tops, turnip tops, cucumbers, pickles, olives, young onion tops. Nuts of various kinds (except chestnuts), almonds, filberts, walnuts, Brazil nuts, cocoanuts, butternuts, pecans, etc. Condiments in moderation.

What to Drink.—Water, soda, seltzer and all mineral waters, Tea and coffee without milk or sugar. Unsweetened spirits, as cognac, whisky, gin, rum, etc., claret, red burgundy, the driest pale sherry, Amontillado or Vino de Pasto.

What to Avoid.—Milk, except very small quantities for cooking purposes, skimmed milk or whey. The liver of all animals. Oysters, the interior of crabs, lobsters, etc. Common flour, biscuits, rusks, toast. Farinaceous vegetables—as potatoes, rice, oatmeal, corn flour, sago, tapioca, arrowroot, maccarroni and vermicelli, barley meal, etc. Saccharine vegetables—turnips, carrots, parsnips, peas, French beans, beets, onions, Jerusalem artichokes, asparagus, rhubarb, tomatoes. Blanched vegetables of all kinds—celery, sea kale, endive, radishes; also stalks and white parts of such vegetables as cabbage, lettuce, broccoli, etc. Fruits of all kinds, jams, syrups,

sugars, honey. Certain condiments, as chutnee and sweet pickles, cocoa and chocolate. All malt liquors, with exceptions specified; cider, champagne and all sparkling wines; port, Madeira and all sweet wines; sherry, except the driest; sweetened spirits and liqueurs.

Special Suggestions.—Price's glycerine may be used as a substitute for sugar and syrup. An egg beaten up in tea or coffee forms a substitute for milk. The most palatable form of prepared bread is the gluten roll; this cut into slices, well buttered, may be advantageously eaten with potted meats, anchovy paste, caviar, etc.

An agreeable omelette may be made with four eggs to one tablespoonful of milk.

Melted butter without flour, may be prepared as follows: Rub up the yolk of a hard egg-boiled with olive oil until a rich paste is formed, add two ounces of butter, and heat, gently stirring; add anchovy sauce, capers, fennel, chopped parsley or sorrel, lemon juice, etc., as may be required.

A green salad may be served with meat; it should be mixed with plain oil or vinegar, but the cook should be warned against adding sugar thereto.

As the number of green vegetables permitted is limited, they should be fresh, carefully cooked, and well served. Watercresses should be served at every meal. If the patient will accustom himself to the use of sauer kraut regularly, it will be beneficial.

Meat twice cooked should never be used. Since sweets may not be partaken of, savories should follow meats. Savory omelettes, caviar, anchovies, cheese, fondûs, etc. Sometimes the omelettes may be flavored with grated cocoanut, glycerole of orange peel, essence of vanilla, almonds, etc., or a mixture of sherry (dry), glycerine and lemon juice.

The patient should avoid too great indulgence of his appetite; he should just satisfy his hunger and no more. After a little restraint the craving for extra meat soon ceases.

A list of dishes should be drawn up appropriate for each meal, and these should be as varied as possible.

The patient should carry out scrupulously the diet list above recommended, remembering that a well-regulated diet influences his disease more powerfully for good than does medication. If he grows impatient of the restraint, he should remember that many races live in perfect health upon a far more limited diet, thus: dried flesh or pemmican suffices to keep the Indian or trapper in full vigor for unlimited periods.

Hygiene.—The freshest and purest of air should be breathed; hence the apartments must be perfectly ventilated. Especially must exposure to irrespirable gases be avoided. The patient must not live, work, or sleep in a confined atmosphere. Much of the time should be ~~should be~~ spent out of doors, and large, well ventilated chambers, with open windows, should be used for sleeping apartments.

Special attention should be given to the skin. A warm or hot bath should be taken at least twice a week. The skin should be groomed daily, either after the bath or independent of it on the days on which he does not bathe. A tablespoonful or two of soda should be added to the bath.

Wool must be worn next to the body the year round, and the body at all times kept extra warm, as the temperature is constantly below normal, and chills are very liable to occur from slight causes. For the same reasons, cold and damp winds are to be avoided. Moderate exercise in the open air is very beneficial; it relieves the weary feelings, so common in the muscular system. Exercise should, however, never be carried to fatigue or exhaustion, as these often bring about a

fatal complication (coma), even in the mildest cases. "Catching cold" is another danger to be carefully avoided at all times, as serious complications often arise therefrom.

The patient should drink freely of water—as freely as his inclinations prompt him.

THYMOL IN THE TREATMENT OF ATROPHIC NASAL CATARRH.

Ralph W. Seiss, M. D., in the *Medical News* says:

The great difficulty in curing or even permanently improving atrophic nasal catarrh is but too well known to laryngologists, and any agent which promises somewhat better results than those ordinarily obtained deserves the closest study.

Some eighteen months ago I began a series of experiments with thymol, being led to think that it might be of value in nasal diseases from observing its effects when used as a dressing on some general surgical cases. After prolonged and careful trial, the following four standard solutions have been adopted: No. 1. Thymol gr. ss; Alcoholis f℥ss; Glycerine f℥ss; Aq. dest. q. s. ad. f℥j. M. No. 2. Thymol gr. jss; Alcoholis f℥jss; Glycerine f℥ss; Aq. dest. q. s. ad. f℥j. M. No. 3. Thymol gr. v; Alcoholis, Glycerine āā f℥ss; and No. 4 just twice the thymol strength of No. 3. Nos. 1 and 2 have been used in the atomizer, Nos. 3 and 4 are applied by means of a tuft of absorbent cotton on the cotton carrier.

In early cases of atrophic rhinitis where the epithelium is still intact, and the accumulation of discharge is not great—which are characterized by atrophy of the turbinated erec-

tile bodies, with consequent enlargement of the nasal chambers, and by a peculiar shining red hue of the mucous membrane—the No. 1 solution has been used with the most satisfactory results. This form of atrophic catarrh is invariably preceded by the hypertrophic process, and its pathology is briefly described as being a degeneration from pressure and loss of blood supply; the new-formed fibrous tissue of the advanced hypertrophic rhinitis pressing upon the glands and nutrient blood vessels, and so causing atrophy. This disease may exist side by side with the hypertrophic variety: I have never found either large abrasions (shedding of epithelium) or an offensive odor in these cases. Under the thymol treatment used two or three times per week, the nasal secretion becomes more liquid, the mucous membrane regains its normal pink color, and, from the peculiar stimulation of nutrition, the turbinated bodies increase in size, so narrowing the nasal cavities to nearly their normal lumen; and in connection with tonic treatment and careful cleansing of the nasal chambers, the disease has been finally very greatly improved in from three to nine months, in these but slightly advanced cases.

In what I am accustomed to consider *typical* cases of atrophic rhinitis, the following conditions will be found: The patient complains of great, often of almost choking, dryness in the throat, and of accumulation of mucous crusts, particularly in the vault of the pharynx; loss of the sense of smell; and an intolerable sickening odor may or may not be present in greater or less degree. On inspection the mucous membrane is found to be dry and shining, the turbinated bodies nearly or entirely destroyed by atrophy, and erosions (stripping off of epithelium) may occupy nearly the entire

mucous membrane. The nasal chambers are greatly enlarged, so that the pharyngeal wall can be plainly seen by anterior rhinoscopy. The surface of the turbinated bodies is rough and irregular from unequal degeneration, and intense congestion from crust irritation is generally present. By posterior rhinoscopy the pharyngeal glandular tissue is found to be almost totally destroyed, and the vault and nasal fossa are blocked by often intensely offensive dark crusts, which may be either dry, or soft and mucous in character, and often completely occlude the Eustachian tubes and posterior nares.

The lower pharynx presents a most peculiar and typical appearance; the posterior wall is dry, often puckered from lack of moisture, and intensely congested, the posterior half arches appear drawn much nearer together than in the normal condition, and on pressure with a probe the mucous membrane is found to be practically resting on the bodies of the vertebræ. Deeply congested and frequently abraded tissues are found on examination with the laryngoscope, and the trachea and bronchi are frequently also diseased.

This advanced stage of turbinated cirrhosis is almost invariably confined to individuals of a so-called "tubercular tendency," or at least to those whose physique is much below par and average resistance. The profound systemic disturbance resulting from typhoid fever, diphtheria, and the like, is frequently the commencement of this disease. But too often rapid intra-nasal atrophy of this variety is the forerunner of phthisis.

In this form of atrophic rhinitis the No. 2 thymol solution is used with the greatest care; the nares are repeatedly sprayed with it until *clean*, and the spray is then driven with a strong atomizer into the mouth and as high up in the

pharynx as possible, the treatment being carried out not less than three times a week. After the thymol spray I occasionally touch the deeper abrasions with a solution of nitrate of silver, 100 grains to the ounce of distilled water, and more rarely make applications of properly diluted tincture of *galanga* to the mucous membrane, using a small tuft of cotton on a delieate applicator for the purpose. The pharynx is then painted with the No. 3 or 4 thymol solution, the applicator being gently carried up until the vault is reached. No. 3 is used until it ceases to give pain, when the stronger solution is applied—the applications being made at each sitting to the mucous membrane previously cleansed by the spray.

In all cases of atrophic rhinitis I invariably follow the thymol solution with fluid cosmoline used in an atomizer, and have found this preparation of great value in protecting the mucous membrane and preventing the formation of dried crusts. Patients frequently state that this application gives them greater apparent relief than any other used. The usual tonic and cleansing measures are used in addition, as without them but little permanent improvement will be gained; outdoor exercise and systematic "training" are insisted upon, and strychnia and chloride of ammonium are usually given internally, along with alcohol and careful dieting. Dobell's solution and dilutions of "Listerine" (Lambert) are most frequently ordered as cleansing agents for the patient to use at home, at least twice daily in an atomizer throwing a coarse, strong spray, or by simply snuffing the fluid through the nose; the nasal douche I have entirely abandoned as troublesome and dangerous.

Under the most careful treatment a cure cannot be hoped for, and marked permanent improvement can rarely be obtained in less than seven to nine months; and I have recently

seen cases which, although but little improved by six months' treatment, were greatly benefited at the end of a year by the thymol treatment.

There is a third class of cases of so-called *'rhinitis cirrhotica*, in which I have found use of thymol particularly beneficial; this form occurs in neglected syphilitic or tubercular children, and occasionally in young adults of the same diathesis. The atrophic process is here very rapid and irregular, the turbinated bodies or their remnants having sometimes an almost honeycomed appearance, or may be entirely destroyed. The amount of secretion thrown off is enormous, the nasal cavities literally *leaking* into the pharanx and down the lips, giving a most disgusting appearance. On inspection the nares are found more or less completely occluded with fluid mucus, abrasions may be numerous and deep, and slight hemorrhages are common. The general appearance of atrophic rhinitis accompanied with congestion obtains: caries of bone and cartilage, and involvement of adjacent sinuses are common. According to Forchheimer, of Cincinnati, ozæna is invariably either syphilitic or tubercular in character, and he states that the bacillus tuberculosis is present in the nasa secretions in all tubercular cases.

This is perhaps the most difficult to cure of any of the forms of atrophic catarrh, but by the use of thymol we have achieved better results than by any other method. The treatment is carried out as for the second class of cases, with the addition of penciling the turbinated bodies with a solution of tincture of *sanguinaria*, *myrrh*, or *galanga* properly diluted with glycerine; the solution selected being applied after careful cleansing with the thymol solutions. Applications of nitrate of silver in the solid form I think positively

injurious, from its well-known semi-cauterant and constringing effect; and the insufflation of powdered starch, containing a percentage of silver nitrate, is as unscientific from the standpoint of the chemist, as useless to the rhinologist, the metallic salt being converted by the starch into an inactive oxide, and the starch only serving additionally to occlude the nasal chambers. And drugs applied in the form of powder, with the exceptions of iodoform and boric acid, are the reverse of beneficial in this as in all forms of atrophic rhinitis. Specific treatment, tonics, hygiene and thorough antiseptic cleansing are, of course, insisted upon.

In cases of syphilitic origin, I believe that a practical cure may be obtained by prolonged treatment, although atrophied nasal structures will never be replaced; the tubercular cases rarely improve greatly, and usually die of some intercurrent disease before reaching adult life.

The *causes* of rhinitis cirrhotica are as yet uncertain; why one case of advanced hypertrophic catarrh should remain *in statu quo* throughout the life of the individual, and another rapidly degenerate, has not been demonstrated. Ozæna in infants is probably preceded by an intra-uterine catarrh of the hypertrophic variety, since turbinated cirrhosis *ab initio* is scarcely conceivable by the pathologist. A chronic rhinitis is frequently set up at birth in tubercular or syphilitic children, to degenerate speedily into a true ozæna at the end of a few months of life. I have yet to see a case of advanced turbinated atrophy in even a comparatively otherwise healthy individual, and believe that a "tubercular tendency" is the strongest predisposing factor in the disease, and a weak vitality a necessary soil. Why also we should find in one case the intolerable odor of ozæna, and in another apparently structurally identical no odor whatever, is as yet unproved. I cannot accept the statement of Lefferts, that the odor is due

solely to decomposition—from destruction of the serous glands, consequent sticky and tenacious character of the discharges, and damming up and putrefaction of the same within the nasal chambers,—having seen malodorous cases without any considerable amount of pent-up secretion, and observed no odor of consequence in other cases where the nares were completely blocked, the accessory sinuses not being diseased in either case. I think with Mackenzie, of Baltimore, that ozæna from "constitutional causes" is much more likely to give the characteristic stench than that originating from simple inflammatory conditions.

Advanced disease of the *middle ear* is almost invariably found in all cases of turbinated atrophy of long duration; retraction, thickening, and binding down by adhesions of the membrana tympani with consequent deafness, tinnitus aurium, and aural pain, being the most frequent form of disease. Frequently the drum is deformed by cicatrices, and the history of recurrent, acute purulent otorrhœa may be obtained; a marked tendency to these subacute inflammatory attacks of the middle ear, and to the establishment of a chronic purulent otorrhœa, are characteristic of the ear lesions of advanced rhinitis cirrhotica. No improvement can be made in the aural conditions until the nasal disease has been so far as may be "cured," and I have found thymol of especial service in improving the condition of the aural lesions.

Turbinated cirrhosis cannot be considered a curable disease except in the very earliest stages; highly organized structures once destroyed cannot be replaced; and in consequence of the destruction of the serous glands and the great enlargement of the nasal chambers the patient cannot clear his nose by blowing, consequently even a "normal" amount of mucus speedily dries into scales if cleansing measures be discontinued,

with the result of fresh crust-irritation and the rapid lighting up of the atrophic process. The best that can be done in advanced cases is to palliate or improve, and cleansing measures must be continued at intervals throughout the life of the individual to insure no active return of the disease.

After having tried almost every form of treatment, a description of which has been published, I now use thymol almost exclusively, and think that by it better results can be obtained in many cases of atrophic catarrh than by any other form of treatment known to me.

THE POISONOUS ACTION OF POTASSIUM CHLORATE.

The view first advanced by Fourcroy and Alyon, that potassium chlorate, when taken into the system, gives up part of its oxygen, has, since the investigation of Binz* and Marchand,† been generally accepted in explanation of the poisonous action of the salt. B. J. Stokvis‡ contradicts this view, basing his opinion upon investigations of W. C. Kimmyser,§ of H. C. M. v. Gorcom, and of his own.

Kimmyser has investigated the elimination of the chlorate in his own urine, and in that of rabbits and dogs. He found that, of four grammes of sodium chlorate, there was eliminated unchanged, in his own urine, 2.277 grammes, and in the urine of a dog, 3.618 grammes. In the urine of rabbits, to which one and sixteen grammes had been administered, he found 0.896 gramme and 13.53 grammes, respectively. On the days when the chlorate was administered, there was an increased excretion of chlorides (and usually of urea); but this increase, according to the author, is not to be attributed to a

* Archiv. für experim. Pathol., 1879, p. 153.
† Archiv. für pathol. Anat., 1879.
‡ Berichte der deutschen chemischen Gesellschaft, 1886, p. 778, from Archiv. für experimen. Pathol., 21, p. 169.
§ Academ. Prœfschrift, Amsterdam, 1884.

reduction of the chlorate, but to a drain on the system, since, on the following days, there was a diminution in the amount of chlorides excreted, the chlorate behaves, in this respect, like sodium nitrate, as Kimmyser determined by experiments on rabbits, whose urine had been rendered free from chlorides by inanition. He, therefore, concludes that a reduction of the chlorate in the system is not proven. Such reduction is also denied by Stokvis, Isamburt, Rabuteau, and Von Mering. The small amount of chlorate unaccounted for in the urine is explained, according to Stokvis, by slow elimination, by passage into the secretions, which takes place even after the ingestion of small doses, by reduction in the urine, and by experimental errors. Kimmyser finds that, when urine containing one per cent. of sodium chlorate is allowed to stand twenty-four hours at 20° C., twenty-four per cent. of the salt is reduced This reduction does not take place at 0° C., or in acid urine and is less when the urine has been boiled. It depends, according to the author, on beginning putrefaction. Reduction in the blood depends on complicated putrefactive processes, which take place only when the blood loses its vitality. There is formed, in this case, methæmoglobin and hæmatin. An increased temperature favors the process, but a reduction of the whole quantity of chlorate present takes place only rarely, and when the amount of salt is small.

The appearance of the blood observed in fatal cases o, potassium-chlorate-poisoning is attributed, by the author, to post-mortem changes. The change does not take place in living blood; for the intravenous injection of sodium chlorate in rabbits was followed by the appearance of albumen and sugar in the urine, but, in very acute cases, no methæmoglobin, which, in these animals, passes very easily from the blood to the urine. In protracted cases, however, an active hyperæmia

of the kidney is set up, and the blood corpuscles which pass into the urine are the source of the methæmoglobin which has been found in the urine in many cases of chlorate-poisoning.

The poisonous action of potassium chlorate is due, according to Jacobi, to paralysis of the heart, and this is attributed, by Leichtenstern, to the action of the metal. It does not differ, according to Stokvis, from the action of potassium chloride or sulphate in corresponding doses. According to these authorities, symptoms of poisoning take place only when the dose is large, or the solution concentrated, or when a considerable quantity has been taken into an empty stomach in the form of small doses, frequently repeated. Sodium chlorate acts, according to Van Gorcom, precisely like sodium chloride, whether administered by the mouth, or by the intravenous injection of concentrated solutions.—*William B. Hills, M. D., in Boston Medical and Surgical Journal.*

IN HOW MANY WAYS DO WE HEAR?

Sound is a sensation caused by rapidly succeeding to-and-fro motions of the air, which touch points in the auricle, are reflected, touch the canal of the ear, and are then concentrated on the drum, or membrana tympani. Back and within this membrate is a delicate portion of bone, termed the handle of the malleus or hammer. Fitting into this upper end or head of the hammer is the incus, or anvil, united by a cog-like joint. The third bone is termed the stapes, or stirrup. This last bone, which is the most delicate and also the most important in its relations to every other bone, may be lost, and the drum-membrane gone, yet hearing will remain. It is attached to an oval membrane, which covers a depression in the bone, termed the oval window, being very

movable, the membrane is larger than the foot of the stirrup.

The oval cavity is termed the vestibule, and from it proceed three small openings called the semi-circular canals. Forming a part of this complex yet beautiful apparatus, there is a cavity to which has been given the name of the cochlea, from its resemblance to a snail's shell. The cavity of the inner ear is filled with a liquid, in which are spread out the delicate fibers of the auditory nerve, or nerve of hearing. This nerve is the portio mollis of the seventh cranial or head nerves. As its Latin name indicates, it is very soft and impressible, and also liable to injury from many causes. It arises from the medulla oblongata, and the fourth ventricle of the brain enters the internal auditory canal, and is distributed to the labyrinth on a membrane within the bony cochlea. It is lined with epithelium of a velvet-like nature. A portion of this is termed the organ of Corti, and receives the termination of the auditory nerve. This organ of Corti consists of two rows of rod-like bodies, named the rods of Corti, and several rows of ciliated cells.

Sound is conducted to the membrana tympani, touching it with a delicate or powerful touch, being transferred to the chain of bones or ossicles. These movable semi-solid bodies vibrate, and carry the sound-waves to the fluid of the internal ear by means of the foot plate of the stapes or stirrup, where they touch the fibers of the auditory nerve, being conveyed to the center of hearing in the brain.

These differences in vibrations make sounds higher or lower in pitch, loud or soft, simple or compound. Infinitely more complex are the vibrations produced by an orchestra with a chorus of human voices and solo singers associated. The mind fails in the effort to grasp the wave-form of the

flood of complex vibrations that pours into the ear at every moment. The highest and lowest tones are heard; the qualities of the notes produced by the strings and wind instruments and the voice are all discernible. The theory offered by Helmholtz in explanation of this wonderful property of the sense of hearing is that the terminations of the nerves in our ears can analyze complex vibrations. It was maintained by Helmholtz and others that in the ear every audible tone throws into sympathetic vibration one or more of the nerve terminations, and that all complex tones are analyzed by them into simple pendular vibrations, which affect different nerve terminations according to their frequency of vibrations.

Although this theory is at the present day doubted by some careful observers, among the number Dr. W. Rutherford, Professor of Physiology of the University of Edinburgh, it has the acceptance of many able physicists.—*The Medical and Surgical Reporter.*

THE GONOCOCCUS OF NEISER.

It has become fairly well established that there is a micro-organism peculiar to the gonorrhœa, and that it can be recognized with certainty in all cases. This micro-organism is the genococcus of Neiser (*Centralblatt fur Deutsche Mediziniche Wissenschaft, No. 28, 1879*), since thoroughly confirmed by Bokai, Bochkhart, Sternberg, Keyser, Zeissl, and many others less well-known; and the process for its unmistakable detection is that of Dr. Gabriel Roux, of Paris. This process is based upon the fact that, after treatment of a slide prepared according to the steps of Gram's

method, all gonocci are entirely decolorized by the washing in alcohol which follows the treatment with the iodo-iodide of potassium solution. The process in full is as follows: A drop of pus is spread into a thin layer between two glass slides and allowed to dry in the air. A drop of a solution of methyl-blue in aniline water is placed upon it for a moment and washed off with a stream from a wash bottle, and a few drops of iodo-iodide solution is placed upon and allowed to remain for a few minutes. This fixes the color on micro-organisms in general. Gram's solution is then washed off with water, and while it is still wet a cover glass is placed upon it and it is examined with an oil immersion lens. If micro-organisms resembling gonococci are found, the slide is decolorized as thoroughly as possible with absolute alcohol, and reexamined in water, when all gonococci will be found to have disappeared whilst the other forms of micro-organisms still remain. If desired the pus cells may be brought out again by applying a solution of eosin. As a result of a very large number of examinations of pus, simple and gonorrhœal, it may be said that there is no gonorrhœa without gonococci. The practical value of this test is very great. It will occasionally clear up the diagnosis in cases of vaginal secretions; it may declare the origin of a case of ophthalmia neonatorum; it may have medico-legal value in a case of rape, it may favorably determine the nature of a vaginitus in little girls, and it will declare the nature of a urethral discharge in a male.

It is still undecided whether the gonococcus is the materies morbi of gonorrhœa, but the last successful inoculation, by Bumm appears to have been done with all necessary

precautions. In the present state of our knowledge the following conclusions are justifiable.

1. A micrococcus is found in gonorrhœa, and gonorrhœal diseases which is not found elsewhere.

2. It is in all probability the specific microbe of gonorrhœa.

3. Its discovery has been of great practical value, especially as regards diagnosis and prophylaxis.

4. The method proposed by Roux furnishes the most convenient means of proving the identity of the gonococcus in doubtful cases.

5. As regards treatment the discovery cannot as yet be said to have produced any decided advances.—*C. W. Allen, M. D., in Journal of Cutaneous and Genito-Urinary Diseases, March, 1887.*

THE DIFFERENTIAL DIAGNOSIS OF DISEASE OF THE SOUND-CONDUCTING AND OF THE SOUND-PERCEIVING APPARATUS.

Bartsch, of Parchim, in the *Archives of Otology*, volume XV., numbers 2 and 3, recommends an experiment which seems to him more serviceable then Gellé's experiment in the differential diagnosis above mentioned. It is thus condensed by Dr. C. S. Bull, in the *New York Medical Journal:* The experiment is based on the attempted exclusion from the auditory function of the sound-conducting portion, by rarefaction of the air in the external auditory canal. The air being exhausted from the meatus by means of a rubber tube hermetically inserted into it, the drum-head will be rendered to some extent incapable, at least during great negative pressure, of propagating to the labyrinth the vibrations which impinge upon it. Under great preasure thus exerted upon one's self,

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one feels how the drum-head is extended outward, and, since with such great tension of the drum-head the malleus is also withdrawn from the incudal joint, the transmission of the sound-waves by the drum-head and the ossicles will be thus greatly hindered. In that case, therefore, only those vibrations will be conducted to the labyrinth which are directly propagated by the bones which do not touch the drum-head—*i. e.*, the cranial vibrations. The question then will be, how intensely and how long are these vibrations preceived? Are they of the same intensity, are they perceived for the same length of time as when the tuning-fork vibrates on the head without the air being exhausted from the meatus? In that event, we must assume that the sound-conducting apparatus performs its function badly. Or else, if they are much fainter, or are heard for a much shorter time than before, the sound-conducting apparatus is healthy. The experiment proves that direct bone-conduction really produces auditory sensations.

SOCIETY REPORTS.

ILLINOIS STATE MEDICAL SOCIETY.

[*Reported for The Chicago Medical Journal and Examiner by Dr. J. L. Gray.*]

The Thirty-seventh annual meeting of the Illinois State Medical Society was called to order at 10:30 A. M., May 17th, Vice-President Dr. Elias Wenger in the chair.

Dr. Wenger, in opening the session, spoke of the death of the President, Dr. W. T. Kirk, of Atlanta.

Dr. E. Ingals, Chairman of the Committee of Arrangements, reported that, in consequence of the unsettled state of railroad matters, the committee had been unable to get any reduction in fare for those attending this meeting of the Society. The committee recommended that the hours for meeting be at 9 A. M. and 2 P. M., and for adjournment at 12 M. and 6 P. M., also that the order of business shall be such as is printed on the programme.

Dr. J. L. White, of Bloomington, said: Mr. President, I crave your indulgence, at this time, for a few minutes.

This is the first time, so far as I know, in the history of this Society that it has been called upon to mourn the death of its President, and it seems to me eminently proper that we pause at this early stage in our proceedings to pay a slight tribute to his memory.

Dr. William Thomas Kirk was born Oct. 27, 1833. At the age of eighteen he commenced the study of medicine and graduated in 1854 from the Louisville University. After graduation he came to Illinois, locating at Farmer City, remaining one year, thence removing to Atlanta, where his death took place March 25th. Dr. Kirk was the victim of fatty degeneration of the heart.

In closing, Dr. White suggested that the society send resolutions of condolence to the family of the deceased President, and as a mark of respect that during the sessions of the society the President's chair be appropriately draped. The suggestion was put by Dr. White in the form of a motion, which was seconded by Dr. W. T. Montgomery, and unanimously adopted by the society.

On motion of Dr. E. Ingals the report of Dr. White was referred to the Committee on Publication to appear in the Transactions, under the Necrological Report.

Dr. S. C. Plummer, of Rock Island, moved and Dr. R. Tilley, of Chicago, seconded the motion that the report of the Committee of Arrangements be adopted. Carried unanimously.

Dr. A. Reeves Jackson delivered the address of welcome on behalf of the profession of Chicago, expressing great pleasure at once again being

able to bid the representatives of the medical profession of Illinois a welcome to the city.

On behalf of the Society, Dr. E. P. Cook, of Mendota responded. He said: When I was informed that it would be expected of me to talk back to the *Doctor* of "*Innocents Abroad*," it occurred to me that, Mark-Twain-like, I had better make my arrangements to speak extemporaneously. The doctor then proceeded to read from manuscript, aptly drawing comparisons between the city and country doctor. He was proud of the fact that Chicago has become a medical educational center second to none in our country. "We of the suburban fraternity, compared to Chicago, can think of some things the doing of which would be mutually beneficial, and some we hope you won't do. Don't permit any more medical college enterprises to spring up. Don't make any further subdivisions of the field of medicine. Don't accept material out of which to make doctors if it is found defective, either as to capacity or preliminary education.

Some queries we would like to propound are: In what proportion of cases of carcinoma of the stomach should we resort to resection?

What surgical interference is justifiable in valvular disease of the heart?

How to locate abscesses of the brain?

How can we destroy bacteria without destroying the unfortunate one infested with them?"

The Secretary read letters of regret from Drs. D. S. Booth, of Sparta, and C. Goodbrake, of Clinton.

Dr. J. H. Hollister moved that the call of the committees be gone through and that the report of the Committee on the Practice of Medicine be received at 2 o'clock, which was lost.

Dr. Tilley moved that the printed order be followed out. Carried.

In the case of committees, all except those on Drugs and Medicines, Diseases of Children and Hydrophobia were announced as being ready to report.

On motion of Dr. E. Ingals, Dr. L. S. Tesson, Surgeon U. S. Army, and Dr. James G. Kiernan, of Chicago, were made members by invitation.

REPORT OF THE COMMITTEE ON PRACTICE OF MEDICINE.

The first scientific paper was that of Dr. D. R. Brower, Chairman of the Committee on the Practice of Medicine. He said since the last meeting of the State Medical Society there has been throughout the whole domain of medicine remarkable activity. Many new and important additions have been made to the treatment of disease, to a few of which he proposed to call attention.

The treatment of phthisis by rectal injection of sulphurous acid gas, communicated to the Academy of Sciences, at Paris, by M. Bergeon, is one of the most important of these discoveries. This measure is based upon the physiological fact established by Claude Bernard that the introduction of toxic substances by the rectum does not offer so much danger as when intro-

duced by the mouth, so long as pulmonary elimination is not interfered with.

The results of applying this method in phthisis are:

First: After a few days, diminution of cough. Second: A profound modification of the quantity and quality of expectoration. Third: The suppression of sweating and gradual disappearance of moist *râles*, and improvement of the general condition.

The next subject to which he called attention is contained in a paper by Dr. John D. Skeer, of Chicago, entitled "A Pathognomonic Symptom in Diagnosis of Tubercular Meningitis," the symptom being a small circle which forms in the iris near to and completely surrounding the pupillary margin. When it begins to appear it is very distinct, and resembles a wreath of thin white clouds, the edge of which extends at first to the free border of the iris; in from 12 to 36 hours the whole margin of the iris will be involved, having become of a whitish or yellowish brown color, and appearing irregular, thickened, and somewhat granular. These changes are commenced in both eyes simultaneously. This cloud-like appearance is in some cases very evanescent; hence the necessity of examining the iris at every visit. These rings are permanent, and grow narrower and larger with the progressive dilatation of the pupils as the disease advances.

Much has been written on the subject of antipyretics, the latest discovery in this direction being antifibrin. In general terms it may be stated that it is about four times the strength of antipyrin. The effect of the drug upon the temperature is noticed in about an hour.

Many valuable contributions will be found in current literature on the relief of insomnia by the new hypnotics, especially urethan and paraldehyde. Experience teaches that urethan should be given in large doses.

On motion of Dr. E. Ingals, the Society adjourned to meet at 2 P.M.

TUESDAY AFTERNOON SESSION.

The Society was called to order at 2.20 P.M., Vice-President Wenger in the chair.

Dr. D. R. Brower gave a short resume of the balance of the report on the Practice of Medicine, after which Dr. P. H. Oyler of Mt. Pulaski, of the same committee, read a paper on "Diphtheria," in which he claimed that true diphtheria is a zymotic disease, which he believes to be undeniable, and that every theory to the contrary must fall to the earth. That it attacks only unhealthy mucous membranes, and through them finds entrance into the circulation, as claimed by some, he believes to be groundless. He said he had not investigated chemically the character of the virus, but from observation and his convictions, he based his treatment upon somewhat different reasoning than that almost universally accepted. No one will deny that cholera is a zymotic disease. He had been taught that in cholera there existed as uper-acidity of the sanguineous fluids, and he believes that in *all* zymotic diseases the same condition exists to a greater or less degree. Taking the view that there is an acid condition in the

development of the disease, the remedial agent sought for should be the one that would meet the greatest number of indications. The treatment he had been using since 1880 is carbonate of ammonia, jaborandi, benzoate of soda and quinia sulphate, steam and poultices around the throat. In his experience this treatment had been much more successful than Tr. Ferri. Chlorid. Carbonate of ammonia had been given in large doses, 30 to 60 grains in solution.

Dr. E. F. Ingals, in opening the discussion upon the gaseous treatment of tuberculosis, said he could not look upon that method of treatment as a "cure all," by any means. In all the cases in which he had used that treatment he had continued the other treatment the same as if the new method had not been used. He had seen the temperature go down within four or five days, the expectoration gradually diminish, and the night-sweats cease. However, in one case the temperature had gone up again, and things looked bad. In one case the laryngeal symptoms were made worse. It is to be remembered that there are dangers to be guarded against in administering the gas. As a rule, for a time at least, the injections should be given by the physician.

He had been much interested in the paper on diphtheria. The treatment suggested by Dr. Oyler seemed to him novel at least. He had found, however, that every one has his peculiar treatment, which is peculiarly successful. He had no doubt that some of those present had treated hundreds of cases of diphtheria, with few deaths. But all know that severe cases of diphtheria are very likely to die. The old-fashioned treatment has seemed to him to be more useful. Certainly nothing should be done to increase the struggling of the patient.

Dr. J. A. Robison said that his experience in making the sulphurous waters had been such that he gives preference to the natural mineral waters. He had been unable to get the chemical reactions with the artificial waters; but he did not mention the mineral water which he generally uses because he did not wish to seem to be advertising it.

Dr. N. S. Davis said he had very few words to say in reference to this method of treatment of consumption, for he had no personal experience with it, but he occasionally gets a little history of some of the cases thus treated. A young man in the suppurative stage of consumption came to his office. He had been using the treatment ten days, and, according to his report, instead of diminishing the suppuration, he insisted that his expectoration had increased, and that he had received no benefit whatever. He had only used it ten days, and Dr. Davis encouraged him to continue its use. He mentioned this simply to show that in diminishing the night-sweats, expectoration, etc., that case had not been in accordance with the usual results.

He said he rose more especially to ask whether, in devising treatment of diphtheria or any other acute febrile disease, we are not too apt to confine our efforts to the finding of some remedy or some combination of remedies that are to be commenced and continued through to the end. One man advocates the tincture of iodine as the best remedy; another car-

bonate of ammonia in big or little doses, whilst another administers calomel from the beginning to the end, and all for the same purpose. Each one has some leading remedy, and something to prop it up with, as he goes along. It had seemed to him, in his experience in this disease, that there is a definite process, general conditions, conditions of secretion, conditions of exudation—products essentially different as they progress. He had attended many cases of diphtheria in former times, and had gone through many epidemics. Epidemics differ in their severity, in their fatality, their amenability to treatment, as clearly as the differences in temperature.

When he came to a case of diphtheria at its beginning, he found, most frequently, a dry skin and a tendency to the checking of secretions generally. After the lapse of four or five days the exudation, not only on the membranes, but the glands of the neck become tumefied and reach their culminating point. In the course of twenty-four hours, if the patient lives, one can distinguish signs of disintegration, gradual softening and breaking down of the tissues, the pulse more rapid, easily compressible, and small ulcers appear in the membrane. In the first stage some remedies may be used to promote needful secretion and hold in check the excessive temperature. If there is any stage at which calomel is wanted it is at that time. But if iron and carbonate of ammonia are commenced at that stage, usually no good results follow.

But just as soon as the culminating stage is reached and the pulse begins to be softer and quicker,—when the countenance is a little less florid—then begins the stage of depression, and then is the time for the use of carbonate of ammonia, iron, or anything that will act in the same direction. The point that he wished to make is, that we must adjust our remedies to the stage of the disease, and not begin with one remedy and carry it through the successive stages with little or no heed as to the indications.

Dr. D. A. K. Steele said in conclusion, that just at present Bergeon's method is the live subject of the day, and, while it is not applicable to the cure of consumption, and does not destroy the bacilli, yet it is of benefit when it comes in contact with any suppurating surface. After the symptoms of sepsis or blood-poisoning have disappeared, to a certain extent it is of advantage as a germicide, that is, in lessening the quantity of the sputum and its offensiveness. But it does not cure the disease. It is the fashion at present, and we have to use it. The apparatuses that are on sale are very frail and quite expensive. One can be made very easily for four or five dollars. In regard to the usefulness of this method of treatment he would say that it is simply on trial and that he is not an enthusiast in its advocacy, and would venture the prediction that it will prove quite evanescent.

Dr. E. Ingals said he was reminded by the discussion of these subjects of the old proverb, "A new broom sweeps clean," to which Dr. N. S Davis replied, that it may soon get worn and soiled.

Dr. G. L. Corcoran said he had heard a great deal said in regard to this new treatment, the injecting of gases in pulmonary phthisis. In all probability there may be something in it. There must have been something to

start the matter, and the probability is that something may be evolved from it. It might seem improbable to those who had long been engaged in the practice of medicine that the injection of gases would benefit tubercle in the lung. But nevertheless, stranger things have come to pass, and it may be that by prosecuting this matter and using different gases, some thing of importance may be arrived at. In the treatment of phthisis pulmonalis he thought that he had found nothing so beneficial as the use of iron and arsenic. There being no further discussion, the papers were referred to the Committee on Publication.

REPORT OF THE COMMITTEE ON SURGERY.

Dr. D. A. K. Steele, of Chicago, in making the report of the Committee on Surgery, said he would give a resumé of the principal work done during the year by those who may be regarded as leaders in the science and art of surgery. The elaborate memoir of Dr. N. Senn, of Milwaukee, on "The Surgery of the Pancreas," represents the greatest amount of original research during the year in this country, and supplies the data upon which to base rational methods of treatment for such diseases or injuries of the pancreas as may be amenable to surgical interference.

OSTEO-MYELITIS.—The micro-organisms of acute infecting osteomyelitis have been identified, according to Rosenbech, Becker and Garre, as Staphylococcus Pyogenus Aureus, and Staphylococcus Pyogenus Albus, and Streplococcus Pyogeus. Ooccasionally the same micro-organisms are found in pyæmic actinomycosis.

The parasite of this disease was first described by Lebert in 1857, and Dr. W. T. Belfield, of Chicago, was the first to identify the disease in cattle known as lumpy-jaw as actinomycosis, from the ever-present millet-seed bodies which, under the microscope, are shown to be fungus mycelia of the first class. The only efficient treatment is thorough opening and scraping of the abscess-cavity, with destruction of the infected tissues.

Malignant pustule retains its interest, as it was the first mycotic disease discovered in man.

TUBERCULOSIS.—During the past few years scrofulous, strumous, malignant diseases, white-swelling and lupus have been definitely classified as tuberculosis of bones, joints or synovial surfaces, and rendered curable by the recognition of their pathology.

WHITE THROMBUS.—It has been shown that foreign substances in the blood-currents are soon covered with a blood-plaque. When stasis from any cause occurs, the third corpuscle or blood-plaque undergoes a vicious transformation, adhering to the white corpuscle and the vessel-wall, causing a white thrombus.

ANTISEPTICS IN SURGERY.—Dr. Knapp, of New York, after a careful series of experiments, believes that suppuration is always caused by bacteria, and has proven that sterilized solutions of chemical irritants introduced into the blood are not followed by suppuration. He concludes

that fermentation is the decomposition of carbo-hydrates into simpler compounds, by the agency of living microbes.

THORACO-PLASTY.—Has been performed, with the result of obliterating old pleural suppurating cavities.

SURGERY OF THE KIDNEYS.—Surgical operations on the kidneys are becoming so frequent as to require no special notice. The operations usually done are:

Nephrorrhaphy or suturing a floating kidney.

2. Nephrotomy or exploratory incision.
3. Nephrectomy or excision of a diseased kidney.

SUPRA-PUBIC CYSTOTOMY.—Has been gaining favor again.

WOUND-HEALING.—In the reporter's private practice, the matter of antiseptics is thoroughly looked after and solutions of bichloride, 1 to 500 freely used in washing the field of operation. The spray has been entirely abandoned by him during the last three years.

Dr. Steele reports several cases operated on by himself, three of shoulder, one of thigh, two of leg amputations and one of excision of the hip. In operations on bone, he follows Schedo's method. In simple fractures, he uses a primary plaster-cast, while in delayed union or ununited fractures he drills the unossified band of callus between the fragments in various directions. If this fails, he cuts down upon the ends and fastens them firmly with bone-pegs.

Dr. B. F. Crummer, of Warren, reported a case of unique wound of the chest, in which the lung was extensively lacerated, and a large hemorrhage occurred into the right thorax. No air could gain access through the wound and no foreign body remained in the chest. He also reported several cases of pleuritic effusion and one of spontaneous recovery from empyema.

By vote of the society, discussion of the report on surgery was made the special order for Wednesday at 2 o'clock, the discussion not to exceed one hour.

REPORT OF THE COMMITTEE ON OBSTETRICS.

Dr. Ellen A. Ingersoll, of Canton, Chairman of the Committee on Obstetrics, gave a general resumé of the literature on the subject, and considered especially

THE SIGNS OF PREGNANCY.—During the first eight weeks of pregancy the changes in the uterus are practically limited to the body of the organ. As a result of these changes the uterine body loses its pear shape. These changes constitute Hegar's sign, viz.: "The increase in the anterior curvature of the uterus, with increased elasticity of the uterine walls."

MANAGEMENT OF THE SECUNDINES.—The management of abortions, attended with retained secundines, has been much and ably discussed, the preponderance of expression being to favor the immediate removal of the

uterine contents when the ovum had been expelled, and the placenta and membranes remained. In the latter months of pregnancy, the speaker knew of no facts which justify the expectant plan in the management of the third stage of labor.

ANTISEPTICS.—While there are none who do not believe in aseptic principles there are many who do not seem to realize that absolute cleanliness is the great antiseptic precaution. The literature during the year, pro and con, was elaborately discussed.

FORCEPS.—In the review of the literature, mention was made of Breus' and Felsenreich's modification of Tarnier's and Dr. Brooks F. Wells' device for converting an ordinary obstetrical forceps into an axis-traction forceps, and the pelvic-outlet forceps of Dr. A. J. Stone.

PUERPERAL ECLAMPSIA.—The three most important principles to be carried out in the treatment of puerperal eclampsia are sedation or suspension of the reflex functions of the spinal cord; prompt reduction of arterial pressure, and the elimination of effete matter from the system. Veratrum viridi probably stands first as a sedative.

Dr. T. G. Thomas, in the strongest manner, advises the induction of premature labor in eclampsia occurring at the sixth, seventh and eighth months of pregnancy.

EXRA-UTERINE PREGNANCY.—As compared with other abnormalities of pregnancy, abdominal gestation is rare. Ectopic gestation falls naturally into three groups: First, cases seen in the early months; here the placental souffle can be heard with the vaginal stethescope at the end of the sixth week. Second, cases at mid-term; here if rupture occurs death is almost certain, therefore operation should always be undertaken. Third, cases after the seventh month where the child is living; in these cases cæsarian section is indicated, and operation is a duty. The use of electricity in this disease is at least receiving the attention it merits.

DYSTOCIA AND PREMATURE LABOR.—The past few years have been especially fruitful in measures for preventing and overcoming severe dystocia, one of the causes of which is lateroversion at the beginning of labor.

In conclusion, Dr. Ingersoll gave a resumè of the latest information on cæsarian section, giving in brief the modification of Poro's operation devised by Dr. John Bartlett, of Chicago.

"Does a Retention of the Secundines Necessitate Septic Poisoning?" is the title of the

SUPPLEMENTARY REPORT

of Dr. W. H. Conibear, one of the Committee on Obstetrics. The paper was read by Dr. Ellen A. Ingersoll, in the absence of the author. The writer of the paper is of the opinion that retention of the secundines is not a frequent cause of septic poisoning, and cites several cases from his personal experience in support of his doctrine.

Dr. C. W. Earle, in opening the discussion of the preceding papers, called attention to the fact that Hegar's sign was long since recognized,

but no one until Hegar had considered it with sufficient definiteness to describe it. Another symptom or condition of importance in the diagnosis of pregnancy is the discoloration of the mucous membrane of the vagina. This has been brought forward as a new symptom within the past few months, but it is nevertheless old. Doctor Earle said that the facts noted in the report of the long retention of secundines simply demonstrated that so long as no septic matter came to the woman, these foreign bodies were practically inert. In Italy, or in any of the European countries, if an operator is asked, after one of the severer obstetric operations, "Will that woman recover?" he will answer "Yes, she will recover if I have not infected her." Are we, as American physicians, ready to take the responsibility of thus negligently infecting puerperal women? He said that this was a question which needed the most careful discussion.

Dr. O. B. Will, of Peoria, said he would like to enter his most emphatic protest against injections, either vaginal or intra-uterine, immediately following labor. His habit is to cover all wounds with iodoform and apply the pad advised by Garrigues, of New York. He has had no bad results from such treatment. In cases of retained secundines, he immediately removes the remaining portions, if need be using force; after which the iodoform and pad are applied.

Dr. Sarah Hackett Stevenson said there are at present two methods of dealing with the secundines—The conservative and the radical. She, in her practice, has used the conservative method, if she has the patient under perfect antiseptic control. The statement of Dr. Earle leaves no room for autogenetic poisoning. It is frequently the case that the patient has within her germs which at the puerperal period infect her without any communication from nurse or doctor. The speaker called attention to the fact that Dr. Ingersoll had neglected to mention the axis-traction forceps of Dr. Bartlett, of Chicago.

Dr. E. P. Cook, of Mendota, thought that the subject was one on which most should agree. He was greatly in favor of an early, complete emptying of the uterus.

Dr. E. Ingals, of Chicago, was not in the habit of using injections. His method is the more conservative one. He relies largely upon nature, considering labor a purely normal process, and the less interference the better.

Dr. J. H. Hollister, of Chicago, spoke in favor of the conservative method of Dr. Ingals. He has used it for thirty-nine years, and his results have been unusually good.

Dr. G. W. Nesbitt, of Sycamore, spoke in favor of the early emptying of the uterus, considering it in every way preferable to any other plan.

Dr. E. Wing, of Chicago, called attention to the difference between asepsis and antisepsis. He also was of the same opinion as Dr. Earle, that there is no such thing as autogenetic infection.

The Society then adjourned to Wednesday at 9 A. M.

WEDNESDAY MORNING SESSION.

The Society was called to order at 9:40 o'clock, Vice-President Wenger in the chair.

The first order of business was the call for voluntary papers, and the following were offered, viz:

Dr. H. Gradle, of Chicago: "On Ocular Disturbances from Nasal Disease."

Dr. F. C. Holtz, of Chicago: "On the Use of the Acetate of Lead in Certain Conditions of the Eye."

Dr. C. W. Earle, of Chicago: "On One Factor in the Etiology, and One Means of Cure in Puerperal Fever."

Dr. S. S. Bishop, of Chicago: "On Operation for Mastoid Disease."

Dr. E. L. Holmes, of Chicago, on "Jequirity."

On motion of Dr. A. Wetmore, of Waterloo, the time for hearing these papers was fixed at after the reception of the reports of committees.

Dr. E. Ingals, of Chicago, read invitations to the Society to visit the Presbyterian Hospital, Rush Medical College, and the Woman's Hospital.

On account of the sudden illness of Vice-President Wenger, Vice-President Ensign took the chair.

The next order being the address of the President, Dr. A. Wetmore, of Waterloo, moved that at any time the order of business shall be suspended to hear the President's address whenever he may be prepared to deliver it. Carried.

Dr. E. Ingals, of Chicago, read the report of the Committee of Arrangements on credentials of delegates and list of members present.

The Secretary read a message of greeting from the Southern Kansas Medical Society, and he was directed to send a return message, in the name of the Society, reciprocating the courtesy.

The resignation of Dr. E. W. Jenks, of Detroit, on account of removal from the State, was accepted.

The receiving of the reports of committees was then proceeded with.

The Chairman of the Committee on Gynæcology, Dr. O. B. Will of Peoria, made an exhaustive report on the progress in that department of the profession during the year. This progress was largely in the way of reconsideration and revision. Special reference was had to the radical change of view concerning the use of certain instruments. The various views held by eminent men concerning pelvic inflammations were fully considered, much attention being given to pelvic abscess. The author believes that thorough evacuation of the pus is the only curative measure in pelvic abscess.

Upon the subject of the removal of the uterine appendages, more perhaps than any other, there prevails a sentiment of distrust and apprehension. No one doubts that the so-called "Tait's operation," or its modification, has been abused. A correct diagnosis is to-day the prominent factor in solving the problem of abdominal section in any given case. One very important symptom in disease of the tubes is frequently a stellicidium of bloody

grumous material passed from uterus and vagina, which is regarded by the patient as a prolonged menstrual flow. A further aid to diagnosis may be found in the presence at any time of gonorrhœa. Dr. Howard Kelly relies entirely on bimanual examination. Concerning the technique of the operation nothing new has been developed except the use of hot water within the peritoneal cavity to prevent shock.

In concluding the reporter called attention to the method of tamponing the vagina as recommended by Dr. Englemann, of St. Louis, and Dr. Etheridge, of Chicago.

Dr. Catharine Miller, of Lincoln, of the same committee, reported "Cases of Posterior Misplacement of the Uterus in Virgins, with Comments." These misplacements resemble in most particulars those in parous women, but they differ in some important respects. They are rather frequent. The reporter then gave the histories of three cases which had occurred in her practice during the past winter.

Dr. J. G. Kiernan opened the discussion of the report. He said that on the question brought up by Dr. Miller regarding the influence of local conditions in producing constitutional effects, and also as to the effects of certain habits, such as climbing stairs, rope jumping, and the like, much of importance might be said. It seemed to him, however, that Doctor Miller omitted one condition, and that is this, that a woman coming from a defective family is very likely to have uterine displacements. There has recently been considerable reaction against the excessive use of local vaginal applications in the treatment of conditions like dysmenorrhœa, which appear in a great many cases as the result partly of constitutional disorders.

That dysmenorrhœa is a neurotic disorder there can be no reasonable doubt. In the insane hospitals one finds many female patients suffering from local disorders which are the result of constitutional conditions, and proper treatment of the constitutional condition relieves the pelvic disorder. That the pelvic organs have been much over-treated must be evident to anyone.

He was very much pleased to hear Dr. Miller take the position she does concerning the question of examinations.

Dr. G. W. Jones, of Danville, said regarding the points raised by Dr. Will relative to the danger of pelvic abscess opening into the rectum, he wished simply to record the fact of three cases in his practice that were entirely successful. He wished also to emphasize what Dr. Will had said regarding the use of the dry-wool tampon. He had found it one of the most efficient means for support of the pelvic organs in a large number of cases, particularly in those of relaxation of the soft parts.

Regarding retroversion in virgins, his experience and observation led him to believe that there are a large number of virgins born with retroversion of the uterus, and that it gives them no annoyance. He knows of one family, a mother and five daughters, all of them having retroversion, and all healthy in other respects. In all these cases evidence of the fact that retroversion had existed previous to child-bed was very positive. In vir-

gins a satisfactory examination can be made by careful manipulations through the rectum in eight cases out of ten.

Dr. G. W. Nesbitt, of Sycamore, said he would like to say in regard to the use of the tampon that it seems, from the remarks made by the members, that it is the custom to use the absorbent cotton in making the tampon. The absorbent cotton is very objectionable, because when wet it is very hard. The ordinary fine cotton batting does not pack down as absorbent cotton does. He uses a brand called "Queen's Own." He believes that the original idea of Dr. Sims, in advising the tampon saturated with glycerine, was to use the non-absorbent cotton.

Dr. L. G. Thompson, of Lacon, said he had been very much interested in the papers presented, especially by the practical character of the second one. Regarding Doctor Will's paper, he would say that country doctors do not come across cellulitis and pelvic abscess very frequently. He desired to emphasize one thought in the second paper concerning the importance of considering the liability to uterine trouble in virgins. Many physicians think virgins are not liable to that form of derangement, but his observation led him to believe that it is much more common than many are disposed to think. He finds every now and then a case of uterine displacement accompanied by chronic inflammation in a virgin. In regard to using non-absorbent cotton he would say that when it is removed the next day after it is introduced, it is as good as anything else, but if it is to be left for a longer time, one should use something else. He has been in the habit, where the uterus must be supported, of still applying some form of pessary.

Dr. J. S. Whitmire, of Metamora, said that the idea that a young miss can have congenital retroversion is new to him. It is true that nature may have wonderful caprices, and that certain kinds of exercise in young misses produce inflammation of the uterus, there can be no doubt; and there is no question but that other troubles may be produced in the same way.

Dr. D.T.Nelson, of Chicago, said he was heartily in favor of the suggestions contained in the report. He, however, does not believe in congenital retroversion. He thinks it may be possible, but he regards it as being highly improbable. Tight clothing, high heels and other habits of both mother and child have much to do in producing displacements at a very early age.

Dr. Catharine Miller, in replying to the criticisms on her paper, said she was heartily in accord with many of the suggestions made, and had not embodied some of them in her paper, simply on account of the necessity for brevity.

Dr. O. B. Will said the remarks of Dr. Thompson concerning the country practitioners' not frequently coming in contact with cases of pelvic inflammation, were erroneous. In his mind this class of disorders was first seen by the country practitioner.

Dr. Thompson, in reply, said his remarks related to the country physician and not to the general practitioner in highly-populated centers. He thinks country physicians do not meet frequently with pelvic inflammation.

On motion of Dr. D. W. Graham a recess of ten minutes was taken for the selection of the Nominating Committee.

Dr. S. C. Plummer, of Rock Island, extended an invitation to the Society to hold its annual meeting at Rock Island next year; and the request was referred to Committee on Nominations. The Society then adjourned until 2 P. M.

WEDNESDAY AFTERNOON SESSION.

The Society reconvened at 2:20 o'clock, Vice-President Ensign in the chair.

Dr. D. A. K. Steele gave a brief synopsis of his paper read yesterday afternoon. He also exhibited some of the patients to which he referred yesterday. A case of amputation at the shoulder, in which all the joint tissue was removed, was of special interest.

Dr. P. H. Oyler, of Mt. Pulaski, opened the discussion by inquiring why a compound fracture, or a compound comminuted fracture, cannot be hermetically sealed.

Dr. C. T. Parkes, of Chicago, said he had been much interested in the papers presented by Drs. Steele and Crummer. He had used cocaine in some cases with very happy results, and mentioned one case of ununited fracture in which he cut down upon the bone, and no pain was felt by the patient except when the bone was being divided by the saw. In these cases I do not use the wire in ununited fracture. It has been my experience to cut down upon one or two cases in which wiring had been practised, and in these cases there had remained a fistulous opening, and the cause of the opening seemed to be the wire. He thinks there are times when this method, as well as the use of bone pegs, is advisable, but there are a great many cases of compound comminuted fracture that recover without any such treatment.

Dr. Parkes was unable to understand why Dr. Steele used iodoform to cover the wound surface. Some one has recently said that any form of microbe could be propagated in iodoform. One general principle in surgery is, that a wound surface shall be kept free of any foreign body and iodoform is certainly a foreign body. He reported a case in which suppuration was apparently caused by traumatism, the experiments of Dr. Knapp to the contrary notwithstanding. Dr. Parkes agreed heartily with the portions of the paper concerning examinations of the kidney, and also respecting the necessity of doing the median incision for the exploration of the bladder. He reported the case of a boy in which the operation was the only means of clearing up the diagnosis. Upon introducing the finger into the bladder, a villous tumor as large as the end of a finger was found.

Dr. E. Ingals said the suggestion of Dr. Steele regarding the stretching and falling kidney, reminded him of the the case of a young married lady who had never been pregnant, but consulted him for falling kidney. It was so displaced as to come well down into the abdomen, but could be easily returned to place although it could not be successfully fixed. In

the course of time the lady became pregnant and gave birth to a live child at full term; has since had several children, but the kidney became firmly fixed during the first pregnancy and has remained so ever since.

Dr. B. F. Crummer, of Warren, remarked that nothing had been said as to the open treatment of wounds. In his opinion there are certain cases in which the open treatment is best, as, for example, buffer or crushing injuries; better results can be had from such treatment han by the closing up of the wound.

Dr. D. A. K. Steele, of Chicago, in closing the discussion said he agreed with Dr. Parkes that the wiring and pegging of the bone in many cases is unnecessary. He had also seen some difficulties that Dr. Parkes mentions, as in wire wounds filling with granulations. He said it was his habit to sprinkle a light film of iodoform over the wound surface in amputations, especially if dissolved in ether, as this is an excellent hæmostatic.

There being no further discussion, the report was referred to the Committee on Publication.

On motion of Dr. E. Ingals the report of the Treasurer was read, which showed $1,322.77 in the treasury at the beginning of the present session after satisfying all claims against the Society. The report was adopted and referred to the Committee on Publication.

Dr. Hay moved that the Illinois State Medical Society subscribe $500 toward paying the expenses of the International Medical Congress. The motion was seconded by Dr. Gray, and followed by remarks by Dr. N. S. Davis explaining for what purposes this subscription was needed. After considerable discussion, Dr. Moses Gunn offered an amendment that $750 be subscribed. The amendment was seconded and accepted, and the motion as amended was unanimously carried. This appropriation is the largest thus far made by any state medical society.

The report of the Committee on Drugs and Medicines, Dr. J. G. Tapper, Chairman, was read by Dr. Marie J. Mergler. The paper of Dr. Tapper dealt almost entirely with the prevailing evils existing in the relations between physicians and druggists. He said it is evident to every careful observer that the apparent cordiality existing between the two is quite superficial; that the under-current that has silently flowed on for years has done its work slowly but has at length so deepened and widened the channel, that the position in many localities has become alarming. Looking for the cause of the changed relations, he inquired: "Is it fairly presumable that so large a percentage of physicians are deserting our ranks and becoming pharmacists, that the druggists are becoming alarmed? Is it the terrible annual loss of life as sacrificed by doctors acting in the capacity of dispensers? Both of these questions would be answered in the negative. The skeleton in the closet is a fear that a movement appears to be on foot among many of our reputable physicians of compounding their own medicines and dispensing them directly to patients.

He condemned the practice of refilling physicians' prescriptions, and the almost universal practice of pharmacists exposing for sale their own

compounds in the shape of renovators, blood purifiers, dyspepsia cures, etc. According to the belief of the author the prescriptions of a physician are in no way the property of the druggist. Great stress was also laid on the reprehensibility of the substitution of one drug for another, or using different strengths of the same drug. The report closed with suggestions regarding the use of antipyrine in phthisis pulmonalis. The report of Dr. Marie Mergler, "The Progress of Therapeutics in Gynæcology," briefly noticed cocaine and its applications in the treatment of gynæcological cases, and recommends hydrastis canadensis in cases where ergot has usually been given. The author advises iodoform, and more especially an iodoform-gauze dressing, in placing antiseptic douches for operations on the uterus and vagina. According to the experiment of Fellner, hydrastis canadensis is a cardiac poison, producing alteration in blood pressure, and in lower animals produces direct contraction.

Dr. J. H. Hollister, of Chicago, opened the discussion. He considered the points mentioned in the paper of Dr. Tapper of great practical importance. The time has come when there should be some code of ethics or arrangement to govern the relations between physicians and druggists. The matter of re-filling the prescriptions, or substituting drugs, is one for which the medical profession is held responsible; a responsibility which it is not at all anxious to assume. It had occurred to him to carefully prepare a paper, setting forth the relations of the medical profession to manufacturing druggists and dispensing chemists, so fully and clearly that it would be received by both sides as a just exposition of the relations existing.

Dr. A. T. Barnes, of Bloomington, said that to him this had become a very serious question, but that so far as manufacturing chemists were concerned, he could dispose of them. He kept a waste-paper basket in his office to which most of the samples were consigned. Regarding the relations of the druggist and the physician, he would say that in his town it has become the practice for druggists to duplicate a prescription once, twice, or even a hundred times. They have immense books in which they keep a record of prescriptions, and not only re-fill for the patient, but for his family or friends. They have filled a prescription for a certain kind of pills so often that they are called "Barnes' Pills."

Dr. N. S. Davis said there were two aspects to this subject on which his mind had been well settled for a long time. One was, that the physician should adopt the rule, never to prescribe any manufacturers' medicines whatever; and to prescibe no compounds put up by somebody else. The physician should prescribe if he does not use more than one drug, and he should distinctly state what strength of the materials should be used, designating by the United States Pharmacopœia. The second point was, that the dispensing of medicines should be entirely separate from everything else that goes to make up a drug-store. In European countries the dispensers of medicines are generally found in small rooms, the rent of which would not exceed $5 per month. In this country if a person's sickness does

not last longer than three days his drug bill will exceed the charge made by the doctor. This system is entirely false ; there is no reason whatever why the sick should pay for marble floors, highly decorated rooms and all the clap-trap that goes to make up the ordinary drug-store. He said he was not complaining against any particular druggist, but against the system which was false from begining to end.

REPORT OF THE COMMITTEE ON OPHTHALMOLOGY AND OTOLOGY.

By the Constitution of this Society it is made the duty of the Standing Committee on Ophthalmology and Otology to "prepare an annual report on all the important improvements in the management of diseases of the Eye and of the Ear, effected during the year."

"Improvement in the Management of Diseases of the Eye," has both a positive and a negative aspect. On the positive side may be classed the advances made in gaining more intimate knowledge of the histology of the eye—its physiology and pathology, as throwing more light on the ætiology of disease as the key to its therapeutics and surgery, since the therapeutics, as well as the surgery, may be regarded as the natural sequence of a demonstrated pathological condition, as the corollary follows from a demonstrated proposition.

Ophthalmic therapeutics, including its materia medica, must be based upon ascertained facts in anatomy, physiology and pathology, and substantial improvement in the management of diseases can only be based upon correct knowledge of the pathological condition with which we have to deal: Correct knowledge of the therapeutic measures or materials used in the treatment of disease, or correct knowledge of the surgical principles involved in the mechanical procedures employed. Since modern, scientific ophthalmology may properly be dated from 1851, when Professor Helmholtz gave to the world the result of the scientific investigation which he and others had been conducting in their efforts to effect a reliable means of examining the interior of the eye during life, an evolution has been going on in ophthalmic science, much of the time with rapid strides. The yearly contributions to the science have been great in all directions, and the result has been an accumulation of varied character, and in a comparatively short time—an accumulation that might almost be regarded as an embarrassment of riches. As a consequence, the negative aspect is forced upon the attention of the investigator in the field who seeks evidence of the true advancement made from year to year.

The process of elimination must be resorted to, and one finds the mistakes that usually attend rapid development and premature announcement of supposed discoveries, and finds that here, as in other places in the wide field of medicine, many cherished theories, many vaunted remedies, and many novel and lauded operative procedures have failed to stand the practical and reliable test of time, and in the necessary culling process have had to be relegated to the list of the disappointing, the useless, or the harmful. The results of such work, for even the past year, could not be embraced in a report such as this is designed to be, nor will the space and the time

allotted it permit more than a cursory view of some of the changes wrought in that short time.

Passing over the results of recent investigations of the normal and pathological conditions of the eye, which interest chiefly those engaged especially in ophthalmology, and proceeding to consider the more practical results which may be considered as improvements in the management of diseases of the eye, it may be profitable to consider first the management of the diseases of the appendages of the eye, and later of the eye-ball proper.

In the treatment of inflammation of the conjunctiva, the more heroic measures have been replaced by milder remedies in the acute stages, with great advantages in increased comfort to patients, abbreviation of duration of the affection, and less risk to the integrity of the organ. The introduction of boric acid alone as a topical application to the conjunctiva has done much to simplify treatment of conjunctivitis. The use of cocaine to the conjunctiva continues to meet the expectations aroused by its introduction into ophthalmic practice. Its use in the removal of foreign substances lodged in the conjunctiva or in the cornea, affords great comfort to the patient, and is of real service to the physician in effecting their removal. Another year's trial in the use of infusion of jequirity has served to modify the enthusiastic claims made for it when it was introduced a few years ago, by de Wecker, in the treatment of pannus. Whilst it cannot now be claimed that its use is wholly free from danger, yet the risk is less than that from purulent inoculation of the conjunctiva as practiced years ago, and for which jequirity may be regarded as having in a measure been substituted. Its true value, and its proper place in ophthalmic therapeutics, remain yet to be fully established.

The part which the blennorrhagic micro-coccus or gonococcus plays in producing morbid discharges from mucous surfaces, including the conjunctiva, is one of the problems not yet fully solved.

The recently reported experiments by Professor Knapp, of New York, upon rabbits' eyes have been both interesting and suggestive, and seem to indicate that simple traumatism alone is not sufficient to establish a suppurative process. The germ theory of the origin of disease does not exclude purulent secretion of the conjunctiva. Certainly the locally unirritating parasiticides may be used with advantage in established suppurative processes of the conjunctiva, and asepsis should always be sought for in operations upon the eye or its appendages. New operative procedures are still being proposed, from year to year, for the relief of entropium, but, apparently, with more satisfactory results than attended the earlier efforts. Whilst many of them give temporary relief from the annoyance of that affection, recurrence of the trouble, after a longer or shorter time, seems to be the usual result.

The subject of strabismus and its relief has been receiving renewed attention of late. Beyond the mere mechanical part of the operation of tenotomy, the subject is a difficult one in many of the cases. Whether the amblyopia which attends many cases be the cause or the consequence,

whether it be congenital or acquired, it is a complication and an embarrassment seemingly very difficult of remedy, and it must be confessed that there is yet much to be learned regarding this very common affection.

Cataract.—In the operation for soft cataract the needle-operation discision is still the one usually practised. After partial disintegration and softening of the lens, suction is sometimes practised to hasten the removal of the lens substance.

In hard cataract, extraction of the lens is still usually effected by Von Græfe's modified linear extraction, either as suggested by him or as variously modified by others.

Manipulation to hasten the ripening of the cataract, in order to admit of earlier extraction, has not thus far been attended by results which greatly encourage repeated efforts, and its practice is not free from danger.

Incision of the periphery of the capsule of the lens, as suggested for the escape of the lens and to prevent continuance of the nutrition of the capsule, thus to avoid the occurrence of secondary cataract, has not met with general favor.

Scooping-out of the opaque lens in its capsule, with the attendant risk of loss from vitreous body, has commended itself, either on theoretica grounds or by practical results, sufficiently to have led to its general adoption.

The matter of dressing of the eye, called the after-treatment, in operations on the eye-ball, especially in extraction of hard cataract, has attracted considerable attention during the past year, because of great innovations on the long-established custom of bandaging of eyes thus operated upon, and the confinement of patients to dark rooms, with attendant deprivation of accustomed exercise, and under the depressing influence of darkness. The substitution of strips of adhesive plaster over the eye-lids for the heavy bandages so generally used to secure apposition of the edges of the incised cornea and the splint-like support of the eyelids, has given greater comfort and much satisfaction to patients. Thus far no unfavorable reports have been made to indicate that the change in this mode of dressing has resulted otherwise than satisfactory, but it has, probably, not yet been long enough on trial to have determined either its value or the safety of the operating surgeon in case of failure to secure an average result from an operation for cataract, in view of the seeming proneness of many people to seek an excuse for instituting legal proceedings for alleged malpractice in the treatment of eye troubles.

Glaucoma.—The varying conditions in acute and chronic glaucoma still continue to be an embarrassment in their treatment, in consequence of want of more accurate knowledge of the pathology of that disease in its early stages; it may safely be alleged that no substitute for iridectomy has yet been discovered that is as reliable as that operation in the treatment of the affection. Eserine and other substitutes cannot give the relief required in the condition called, by Knies, "sclerosing inflammation of the angle of the anterior chamber," with the accompanying and consequent atrophy.

Sympathetic Ophthalmia.—This dangerous affection still holds a place, second only in importance to glaucoma, and its ætiology is little if any better understood. Its development seems to be varied in character, and still leaves much doubt as to the avenues of its advance.

The belief formerly held that enucleation of the first affected eye should not be performed after evidence of beginning sympathetic disease in the other eye had manifested itself, is no longer so generally held. A substitute for enucleation of the eye-ball was introduced a few years ago, called opticocitiary neurotomy, and consisted in dissecting the cellular tissue of the orbit, so that by the use of a curved instrument the optic nerve could be divided, and the supposed line of advance of the disease be interrupted. The results which followed a fair trial of the substitute have led to its abandonment.

Evisceration of the globe is a later substitute for enucleation of the eye-ball, in these and other cases in which it is desired to avoid danger of sympathetic disturbance of the unaffected eye, and yet to retain enough of the sclerotic coat of the eye, with its muscular attachments, to afford a moveable support for an artificial eye. It seems to possess merit enough to warrant longer trial.

Astigmatism.—Martin (*Annals d'Oculistique*) describes two varieties of astigmatic contractions of the ciliary muscles which tend to neutralize a symnetry of the lens—an astigmatic condition—and makes difficult the adjustment of cylindric glasses; this can only be overcome by strong mydriatics. The same condition complicates latent hypermetropia. In such cases the use of mydriatics is especially indicated, to overcome the spasmodic action of the ciliary muscle and to suspend the accommodative power of the eye, which is a source of embarrassment and uncertainty in adjusting glasses in errors of refraction, and nominally defective accommodative power of the eye.

It is not improbable, however, that, in the absence of such abnormal action of the ciliary muscle, the use of a mydriatic, with its attendant inconvenience and annoyance to patients, is more general than is demanded by the welfare of patients, for repeated testing by trial glasses will enable one to secure the requisite glasses without the use of a mydriatic, and to the great gratification of patients who had previously been subjected to the annoyance of mydriasis for not only days but weeks.

Plastic Operations.—Transplantation of conjunctiva from a rabbit's eye to the human subject in cases of loss of a part of that mucous membrane, as by burns and other injuries, has been so successfully done as to have given this plastic operation a probably permanent place in ophthalmic surgery.

The success which attended this operation led to the substitution of the entire eye-ball of an inferior animal, by transplanting it into a human orbit, and with partial success, as to cosmetic effect, in case of loss of the natural eye-ball. If experience should prove that such transplanting of eyes can be substituted for the wearing of artificial eyes, which are more or less of an annoyance, it would prove a great advance in many respects.

Von Hippel has recently reported a successful case of transplanting corneal tissue in the case of a young woman. By removal of an opaque portion from the center of a cornea, by means of a trephine, down to the membrane of Descemet, and then by means of knife and forceps removing still more of the opaque corneal tissue, an opening was made into which he transplanted a piece of cornea from a rabbit's eye, with aseptic precautions. Rapid union took place; for a few days the transplanted portion was cloudy, but at the end of a week it had become transparent again, and when report of the case was made eight months later the transparency continued with indications that it would be permanent.

Vision through the transplanted portion was reported as being $\frac{10}{100}$ or 1-10.

Dr. A. E. Prince, of Jacksonville, in his report called attention to an instrument for regulating the pressure used in inflation of the middle ear. It is impossible to arrive at an estimate of the damage done by the unregulated force employed in the indiscriminate use of the politzer bag in the treatment of middle ear diseases. To facilitate the method of inflation and diminish its dangers, attention is called to a graduated mercurial column upon which the patient is required to blow. The instrument is essentially a re-curved tube filled with mercury and supplied with rubber tube against which the patient is required to blow while the ears are inflated. While the mercury is deposed the air is driven by the bag through the nostril in the usual way, and, a force indicated by the pressure of the mercury, plus the momentum of the blast, is expended in inflating the middle ears, and any surplus force, in place of working an over-distension of the drums simply overcomes the upward pressure of the palate, and escapes into the pharynx. This instrument Dr. Prince calls a politzometer.

The report of the Committee on Necrology was read by the Chairman, Dr. E. Ingals, of Chicago. It embraced notices of the late President, Dr W. T. Kirk; of Dr. James S. Jewell; Dr. R. C. Hamill and Dr. McArthur.

The Society adjourned to 9 A. M. Thursday.

THURSDAY MORNING'S SESSION.

The Society was called to order at 9:45 o'clock, Vice-President Ensign in the chair.

The special order being the address of the President, Dr. E. P. Cook, in behalf of the President, gave a short abstract of the address, and it was referred to the Committee on Publication. The address gave a retrospect of the progress of medicine in the State of Illinois during the past fifty years.

The report of the Committee on Publication, Dr. James F. Todd, Chairman, was read by Dr. D. W. Graham.

Three hundred and fifty copies of the Transactions for 1886 were published at a cost of $348.96. About 60 copies remain at present in the hands of the Secretary, subject to the disposal of the Society. The report was accepted.

The report of the special Committee on Diseases of Children was read by the Chairman, Dr. George Wheeler Jones, of Danville. In preparing

his report the Doctor sent the following questions to two or more physicians in each county:

First—"Has there been much sickness amongst the children in your county or district during the past year?"

Second—"What have been the prevailing diseases, and what has been the general type of such affections?"

Third—"Have you had in your district any outbreaks of any of the contagious or infectious diseases of children?"

Fourth—"Have you used, in the treatment of children's disorders, any new line of management seeming to give more favorable results than other plans previously adopted?"

Fifth—"Do you believe that the State Legislature ought to appropriate annually a sum of money sufficient in amount to defray all expenses connected with investigations covering the subjects embraced in 'Infant Mortality: Its Causes and Reduction,' and 'The Contagious Febrile Diseases: Their Prevention and Cure'?"

About twenty-five per cent. of the reports represented an increase of sickness amongst children. The counties in the southwestern portion of the State, and in the low bottom lands of the Mississippi valley, and those representing the lower altitudes of the interior were most involved in increase of children's disorders. Excepting the contagious and infectious diseases, the general line of disease consisted in bowel complaints last summer and respiratory disorders during the winter, all more or less influenced by malarial toxæmia. An unusual prevalence of rheumatism characterized the sickness of the past winter.

With but one exception every reporter mentioned the presence of one or more of the contagious or infectious diseases. The epidemic influence has thus been general throughout the state, but as a rule in a mild form. Scarlet fever, german measles, diphtheria and pertussis have been especially prevalent. The majority of the cases of german measles have lacked the post auricular glandular enlargement which has been considered almost pathognomonic. It seems that rheumatism has never been so prevalent in both old and young as now. For this disease Dr. Jones places great reliance on the phospho-iron preparations and on salicine.

In the reporter's opinion the "avitreous thermometer," is the best for use with children. The report closed with a short review of the therapy of children's diseases.

In response to the last question on the list, concerning legislative appropriations, the answer of ninety per cent of the correspondents was "yes."

Dr. F. J. Shipp, of Petersburg, contributed to the report a paper on

THE CARE OF CHILDREN.

In the first place great stress was laid on cleanliness, and, equally important in the new-born, no water bath shall be used during the first 24 hours of extra-uterine life. The child is given a thorough oil bath, lightly covered with some suitable material and at the expiration of twenty-four hours a warm bath of very short duration is given in a warm room. The

report dealt also with causes of disease and finally the diseases to which children are liable.

Dr. E. Ingals, of Chicago, in opening the discussion of Dr. Jones' paper, said there was one point in relation to the treatment of pertussis to which no allusion had been made and that was the use of chloral and morphia. It is a much more simple treatment than any other. The speaker now uses practically nothing else. It is especially effective in the later stages. He uses one thirty-second of a grain of morphia and one grain of chloral, frequently repeated if necessary in, a child of three years. Concerning the treatment of the diarrhœas of children he endorsed the antiseptic treatment. He was much in favor of rest and laxatives. He has discarded astringents in such cases. It may be useful in some cases to use opiates to relieve irritation but not as astringents. His plan is to empty the bowel and leave it alone.

Dr. Robert Tilley said there was one point mentioned in Dr. Jones' paper to which reference had before been made, and that was the matter dignified by the name of Skeer's symptoms. He knew but little about the symptoms, but had made an effort to get all the knowledge obtainable. When the report was brought up before the Pathological Society of Chicago, a committee was appointed to investigate this particular symptom, and at that time one case was referred to which was thought to be typical. It was at St Luke's Hospital, but upon inquiry at the hospital it was learned the case was not a typical one and had left the hospital. This, however, was the only case that the committee had an opportunity to investigate. Dr. Tilley thought too much importance had been attached to the little "Skeer's symptom." Of course in a well-established peculiarity like the Argyll-Robertson symptom it is well enough to have a name applied; but it would be in bad taste to hoist this supposed peculiarity on the medical profession without a great deal more evidence than we have at present.

Dr. H. N. Moyer, of Chicago, in replying to Dr. Tilley, said that inasmuch as he wrote the report referred to he might be responsible for the term "Skeer's symptom." At the time when the reference was made the committee did not have any cases of tubercular meningitis under their care, but they took every means to get at a case. There were doubtful cases of tubercular meningitis. In these cases the symptoms was not present. The case that was seen in St. Luke's Hospital was declared by Dr. Skeer to be typical in appearance. In Dr. Skeer's paper a distinction is made between a symptom somewhat resembling the "Skeer symptom" seen in scrofulous children and that found in tubercular meningitis, which undergoes changes in a few hours. Dr. Moyer took great pains to look up the literature. Nothing could be found. He communicated with Dr. Block, and he had never seen the condition or read of it, but concluded from the description and drawings sent him that it must be due to an inflammatory exudate which subsequently became colored by the coloring matters of the blood, thus accounting for the varying color changes. He further thought that these changes were not due to any specific infection but rather to intracranial pressure. The pathology is very doubtful, and until it could be definitely settled it was decided to term the condition Skeer's symptoms.

Dr. C. W. Earle, of Chicago, said that in this city there had been a great number of cases of measles, and an epidemic of german measles; also a few cases of varicella, the severity of which he had never witnessed before There has been a great tendency shown to occurrence of a second attack In a large number of cases of german measles post auricular glandular enlargement has been absent. This has made him doubtful as to where to place the cases spoken of.

Dr. A. H. Foster, of Chicago, said his experience had been that of a rather typical epidemic of measles. Following the cases of measles, in three to six weeks there were many cases of german measles without the post auricular enlargement. In several of these cases a longer stage of convalescence was present. This he attributed to the debility arising from the first attack.

Dr. S. W. Nesbitt, of Sycamore, had seen many cases of german measles, sometimes one or two members in the family having the first auricular glandular enlargement, while in others of the same family it was absent. This, he thought, proved that german measles could cccur without the enlargement spoken of by Dr. Earle.

Dr. J. H. Hollister, of Chicago, thought the physicians of his city had seen more cases of repeated measles and more german measles than ever before during the history of the city.

Dr. E. L. Herriott, of Jacksonville, said that cases of german measles seen in his region last year were very light, but this year the cases have been very severe and the epidemic quite pronounced.

Dr. A. E. Goodwin, of Rockford, had seen many cases during they ear of german measles; very little treatment was necessary. He wished to know whether there was any law requiring children to have a physician's certificate before returning to school after an attack of measles?

Dr. George Wheeler Jones, of Danville, in closing the discussion, remarked that he heartily indorsed the rules laid down by Dr. Shipp concerning the treatment of the new-born, especially the oil bath. He had tried chloral and morphia, but on account of its depressing effect had ceased to use it. He had seen many cases of german measles without the post auricular enlargement, and had been somewhat at a loss where to classify them.

The report was referred to the Committee on Publication.

The special report on physiology, by Dr. A. Wetmore, of Waterloo, was passed over on account of the absence of the author.

THE REPORT OF THE NOMINATING COMMITTEE

was read and adopted, as follows:

President—William O. Ensign, of Rutland.
First Vice-President—Chas. Warrington Earle, of Chicago.
Second Vice-President—Philip H. Oyler, of Mount Pulaski.
Permanent Secretary—David W. Graham, of Chicago.
Assistant Secretary—G. L. Eyster, of Rock Island.
Treasurer—Walter Hay, of Chicago.

Judicial Council—G. A. Wetmore, of Waterloo; S. C. Plummer, of Rock Island; and B. F. Crummer, of Warren.

Committee of Arrangements—C. Truesdale, Thos. Galt, C. Bernhardt, G. G. Craig, S. C. Plummer, C. C. Carter, Geo. E. Barth, P. Gregg, all of Rock Island.

Next Place of Meeting—Rock Island.

STANDING COMMITTEES.

Committee on Practice of Medicine—Frank Billings, of Chicago; G. W. Nesbitt, of Sycamore; A. H. Taggert, of Chicago.

Committee on Surgery—S. W. Caldwell, of Freeport; B. F. Crummer, of Warren; S. K. Crawford, of Chicago.

Committee on Obstetrics—George Wheeler Jones, of Danville; C. C. Hunt, of Dixon; Catharine Slater, of Aurora.

Committee on Gynæcology—A. R. Jackson, of Chicago; T. M. Cullimore, of Jacksonville; Mary E. Bates, of Chicago.

Committee on Drugs and Medicines—D. S. Booth, of Sparta; A. J. C. Saunier, of Libertyville; J. A. Robison, of Chicago.

Ophthalmology and Otology—E. L. Holmes and S. S. Bishop, of Chicago; C. A. Palmer, of Princeton.

Necrology—E. Ingals, of Chicago; J. A. Rauch, of Springfield; O. B. Will, of Peoria.

Committee on Publication—D. W. Graham and Walter Hay, of Chicago; G. L. Eyster, of Rock Island.

SPECIAL COMMITTEES.

Diseases of Children—A. E. Goodwin, of Rockford; Mary H. Thompson, of Chicago; W. West, of Belleville.

Antiseptic Obstetrics—Charles Warrington Earle, of Chicago.

Intubation of Larynx—F. E. Waxham, of Chicago.

The Present Status of Bacteriology in Its Relation to Disease—R. J. Curtis, of Joliet, and F. A. Johnson, of Chicago.

Pelvic Surgery—W. J. Chenowith, of Decatur, and Sarah Hackett Stevenson, of Chicago.

Venereal Diseases—H. N. Moyer, J. N. Danforth, and J. J. M. Angear, all of Chicago.

Hypnotics—D. R. Brower, of Chicago.

Compound Fractures—D. A. K. Steele, of Chicago.

Hernia—D. W. Graham, of Chicago.

Physiology—A. Wetmore, of Waterloo.

Dermatology—H. J. Reynolds, of Chicago.

Neurology—H. Wardner, of Anna, and J. L. Gray, of Chicago.

The Exigencies of Excitements During the First Labor—J. S. Whitmire, of Metamora.

Some Topic on Gynæcology—Marie J. Mergler, of Chicago.

Legislation for the Insane—Walter Hay, of Chicago; Edgar P. Cook, of Mendota; Francis B. Haller, of Vandalia.

Medical and Sanitary Legislation—B. M. Griffith, of Springfield; W. A. Haskell, of Alton; John L. White, of Bloomington; Albert B. Strong, of Chicago.

Influence of Appreciable Meteorological and Topographical Conditions on the Prevalence of Acute Diseases—Nathan S. Davis, of Chicago; John H. Hollister, of Chicago; James F. Todd, of Chicago; Edgar P. Cook, of Mendota; George W. Jones, of Danville.

Biographical—John H. Hollister, of Chicago; Ephraim Ingals, of Chicago; Charles C. Hunt, of Dixon; Francis B. Haller, of Vandalia; A. M. Powell, of Collinsville; Edgar P. Cook, of Mendota; John S. Williams, of Otterville; George W. Jones, of Danville; Thomas F. Worrell, of Bloomington; Robert Boal, of Peoria; Hugh R. Guthrie, of Sparta.

To Promote the Organization of Local Medical Societies throughout the State—Edgar P. Cook, of Mendota.

Dr. E. P. Cook read a supplementary report as follows:

This Committee, composed of one member from each county represented, deem it not beyond their province to call the attention of the society to other matters connected with its best interests. We consider it unwise to close our eyes to the fact that the past meetings have failed to bring out the attendance that it should have and to develop the interest that this Society, representing over 3,000 regular practitioners in this State, should possess. Why this is so, we are not prepared to state, but we feel that the future existence of this Society rests on the action taken on this subject in the near future. What measures should be taken to improve the attendance at and interest in our meetings are now matters of very serious consideration, and this must be had at once. In view of these facts we would present the following:

"*Resolved*, That a live working committee of three members be appointed to consider this subject, and such committee be authorized to have the results of their deliberations printed in circular form and mailed to each member. This committee shall have the power to suggest such amendments to the Constitution as they shall think best adapted to attain the ends desired. In addition such committee shall prepare and mail to every regular physician in this State such information concerning this Society as shall be necessary to enlist their cooperation in our State Society work."

T. M. McILVAINE.
E. P. COOK.
A. E. GOODWIN.

On motion of Dr. J. H. Hollister the rules were suspended and Dr. E P. Cook, of Mendota, presented the report of the Committee to Promote the

ORGANIZATION OF LOCAL MEDICAL SOCIETIES THROUGHOUT THE STATE.

"In our judgment the subject is of such importance as to require the appointment of a committee to whom shall be assigned the duty, under instructions and by authority of the State Society, to open a correspondence with one or more of the leading members of the profession in each county

in the State where no medical societies now exist, and urge upon them the importance of medical organization—and representation—of the profession of all parts of our State in the State Medical Society. We further recommend that this duty be assigned to the same committee suggested by the Nominating Committee.

Dr. J. H. Hollister, of Chicago, said that the history of medicine in Illinois had in the past been creditable. We are now at a point where a large number of young men should be enlisted in the work. Just such a committee is needed.

Dr. D. W. Graham, of Chicago, said that the constitution and by-laws are in an exceedingly crude form and a committee to consider suitable amendments is an absolute necessity.

On motion of Dr. H. N. Moyer the recommendations were adopted and the President authorized to appoint a committee of three.

The President announced as such committee E. P. Cook, of Mendota; Thomas McIlvaine, of Peoria; and A. E. Goodwin, of Rockford.

On motion of Dr. E. C. Cook, the nomination of delegates to the American Medical Association for 1887 was proceeded with, and the following persons elected:

E. B. Loomis, Edward Pynchon, Moses Gunn, E. Ingals, J.L.Gray, J. E. Owens, H. J. Reynolds, A. R. Reynolds, S. K. Crawford, J. M. Hall, Walter Hay, D. W. Graham, H. H. Frothingham, Norman Bridge, J. J. M. Angear, and Denslow Lewis, of Chicago; C. C. Hunt, Dixon; William O. Ensign, Rutland; Thomas McIlvaine, Peoria; E. A. Kilbourne, Elgin; W. S. Caldwell, Freeport; F. L. Nutt, Marengo; K. E. Rich, Winona; G. W. Nesbit, Sycamore; S. E. Plummer, Jr., Rock Island; E. A. Ingersoll, Canton; D. S. Jenks, Plano; B. F. Crummer, Warren; David Prince, Jacksonville; A. Nash, Joliet; E. P. Catlin, Rockford; R. Boal, Peoria; A. K. Van Horn, Jerseyville; W. M. Sweetland, Highland Park; W. M. Barrett, Onarga; E. P. Herriott, Jacksonville; Washington West, Belleville; H. T. Hardy, Kaneville; R. W. Gillett, Carlinville; N. B. Cole. Bloomington; A. J. C. Saunier, Libertyville, and J. A. Freeman, Millington.

On motion of Dr. E. Ingals, of Chicago, the secretary was empowered to fill vacancies.

Dr. C. W. Earle, of Chicago, moved that the President appoint a committee of three to name delegates to the American Medical Association for 1888. Carried; and the President named C. W. Earle and D. W. Graham, of Chicago, and G. W. Jones, of Danville.

On motion of Dr. Norman Bridge, of Chicago, Dr. B. F. Uran, of Kankakee, was made a member by invitation.

Dr. D. W. Graham, of Chicago, asked for an appropriation of $25 to secure and bind a complete set of transactions of the Society. Carried.

The Society then adjourned to 2 o'clock p. m.

THURSDAY AFTERNOON'S SESSION.

The Society was called to order at 2 o'clock, Vice-President Ensign in the chair.

Dr. H. J. Reynolds read the report of the Special Committee on Dermatology, calling attention to the treatment of lupus vulgaris by electrolysis, after the method of Gartner and Lustgarten. The flat negative pad is placed over the lupous nodule, a sufficient current to produce escharotic effect is used, and the wound treated after the usual manner.

In urticaria a 2 to 10 per cent. solution of menthol is advised. It is equally effective in pruritis, where camphor solutions are not well borne. In acue of the female, the hot vaginal douche is said to have relieved several cases. The action of cocaine upon the skin if introduced by the cataphoric action of the galvanic current is mentioned as being entirely successful in producing local anæsthesia.

On motion of Dr. E. Ingals, the Biographical Committee was continued, with power to add to its numbers.

Dr. S. S. Bishop, of Chicago, read a paper on "Operations for Mastoid Disease," the object of which was to increase confidence in operations on the mastoid process. In all cases of accumulation of pus in the mastoid region, free incisions are made and the cavity rendered thoroughly aseptic. In those cases where necrosis exists, the diseased bone is removed by chise- or curette. The report concluded with the details of treatment in seven cases occurring in the author's practice during the year.

On motion, the report was referred to the Committee on Publication.

Dr. E. F. Ingals, Chairman of the Committee on Diseases of the Throat and Nose, read a paper on epistaxis, with a recital of cases from his own practice. Epistaxis may be simply the result of a local plethora. In old people the most frequent causes are degenerative changes in the blood vessels. The treatment of the disorder is of two kinds, that designed to check the hæmorrhage and that to prevent its recurrence. For the former, one of the most effective measures is firm compression of the nostrils for 10 or 15 minutes. The application of cold is equally efficacious. In more aggravated cases syringing out the nose with cold water and the subsef quent insufflation of a powder containing 4 per cent. of cocaine and a suitable proportion of iodoform is highly recommended. The author's method o plugging the nares is as follows: A piece of surgeon's gauze, an inch in width and four feet in length, is thoroughly saturated in a solution of tannia prepared by rubbing with sufficient water to make a thin sympy mixture. Opening the nostril with a speculum, one end of the slip is folded on itself and over the end of a probe, by which it is carried quickly to the posterior part of the nasal cavity, and then fold after fold is passed slowly in until the cavity is completely filled. This plan has been successful in extreme cases of epistaxis.

Dr. R. Tilley, of Chicago, opened the discussion. He doubted the statement made by the author that hæmorrhage occurring from the nose is usually an effort of nature to relieve plethora. It is rather an evidence of a weak point in the nose, and the physician should try to discover it and apply a remedy. Polypi are not infrequent in the young, and when present it should be as truly removed as when in an adult.

Dr. L. H. Montgomery, of Chicago, gives preference to a solution of the dialyzed tincture of iron used with absorbent cotton. It has in his hands been very effective.

Dr. H. A. Johnson said that in young persons about the period of puberty there is an excess of blood over that needed for the nutrition of the individual. At such times there is a tendency to hæmorrhage from surfaces poorly supported by surrounding tissues. The speaker does not place much reliance on nitrate of silver in such cases. The Poquelin cautery is much more effective.

Dr. N. S. Davis, of Chicago, gave a verbal report of the Committee on the "Influence of Appreciable Meteorological and Topographical Conditions on the Prevalence of Acute Diseases." The Committee was continued.

Dr. Walter Hay, of Chicago, gave a verbal report on "Legislation for the Insane." The report was discussed by Drs. Kiernan, Cook, Hollister, Bridge and Davis; and the following resolution, offered by Dr. Bridge, was adopted:

"*Resolved*, That this Society heartily indorses the provisions of the bill now before our legislature providing for the commitment of the insane in certain cases without trial by jury; and asks the legislature to enact these provisions at least."

On motion of Dr G. W. Jones, the rules were suspended, and Dr. E. P. Cook presented the following resolution:

"*Resolved*, That the thanks of this Society are hereby extended to the Chairman of the Committee of Arrangements and all who have in any way contributed to making this thirty-seventh annual meeting a success."

Dr. G. W. Jones, of Danville, gave notice that at the next annual meeting a resolution would be introduced changing the wording of Article VII of the Constitution by substituting the words "two dollars" for the words "three dollars."

Dr. C. W. Earle, of Chicago, gave notice that an amendment to Article V would be introduced at the next annual meeting, adding the words "a Committee on Diseases of Children, and a Committee on Neurology" to paragraph 1 of said Article V.

On motion of Dr. S. K. Crawford, Dr. H. Z. Gill, of El Dorado, Kan., was made an honorary member of the Society.

The Society adjourned to meet at Rock Island the third Tuesday in May, 1888.

CHICAGO MEDICAL SOCIETY.

Stated Meeting, April 18th, 1887.—THE PRESIDENT, W. T. BELFIELD, M. D., in the chair.

DR. FRANCIS J. CRANE read the following paper entitled

BERGEON'S METHOD OF TREATING PHTHISIS BY GASEOUS ENEMATA.

In January last the *New York Medical Record* contained an article headed "A New Treatment of Phthisis," which gives a brief outline of Dr. Bergeon's method of administering carbon dioxide mixed with sulphur-

etted hydrogen gas, and referred to an article published in the *British Medical Journal* of December 18, 1886. This described in full the apparatus, and mode of using it, and stated they had been procuring beneficial results by the method, and that Professor Cornil, of Paris, had also become an enthusiastic supporter of it. This led me to write to Dr. Bergeon, and in the course of our correspondence he presented me with an apparatus as well as with the treatise of Dr. Morel read before the French Academy last June, and also one by Professor Cornil. These are so exhaustive that I have embodied in this paper only the essence of both, as follows: "New Treatment of the Diseases of Respiratory Organs and Septicœmia by the Means of Gaseous Enemata according to M. Bergeon's Method," by Dr. V. Morel. It would seem from the statements of physicians who have tried either to prevent the development, or the proliferation of the bacillus, or to destroy it, that it is the one thing which we have to overcome in the treatment of phthisis. In reasoning by analogy with other contagious diseases—as, for instance, cholera and hydrophobia—it might be urged that the bacillus is not the immediate cause of the morbid phenomena of tuberculous affections. It is known that, aside from miliary tubercles, which invade the lungs and are the cause of the patients' symptoms, the gravest phenomena of phthisis are due to the septicæmia, which poisons the patient, and is caused by the suppuration of the tubercles, which, brought in contact with the air, undergoes putrefaction, and is absorbed into the system. The bacillus work, then, by producing lesions of texture, which become fatal to the organism by rapidly destroying, or by undergoing softening and absorption, produce septicæmia. To use Darembourg's expression: "The bacillus is nothing, but the septicæmia is everything."

In acknowledging that it is not necessary to ascribe to the microbe all of the morbid phenomena of phthisis, it is not less true that its presence is to the organism an incessant and real danger, and that consequently, in endeavoring to discover a remedy for the lesions which it has produced, it is necessary to destroy it, or at least to neutralize its action. For this purpose such agents as sulphuret of hydrogen, bisulphide of carbon and other antiseptics mixed with pure carbonic acid, are employed.

Principles of Bergeon's Method.—The first mode of treatment thought of consisted in applying by inhalation some substances having parasiticidal properties. It is known that antiseptic substances are poisonous when introduced into the arterial system, either directly or by inhalation. Claude Bernard has shown that poisonous gases introduced into the arterial system through the lungs produce toxic effects almost instantaneously Besides, the antiseptic substances have an irritating action, and this action, operating on diseased lungs, will only increase the existing lesions, while their unpleasant odor arouses a refusal in the patients to their use; this is probably the reason why so little success has been obtained by inhalation in the treatment of phthisis, and is conclusive proof that the introduction of antiseptics by the stomach is preferable, for Claude Bernard has shown that when a poisonous or mineral substance is introduced into an organ

distant from the arterial system—into the digestive tract, for instance—it cannot enter the arterial system, because it is expelled before reaching it. It must pass through the portal system, the hepatic veins and the pulmonary texture, there to be exhaled, or it can be expelled in the liver with the bile.

It is well established by experiments that the introduction of poisonous substances into the digestive tube may be done without danger by taking certain precautions, of which the most important consist in not injecting too large quantities at once, and not injecting more before the first has been completely eliminated. What avenue ought to be chosen? The stomach or the rectum? In both cases the medicament will have to pass through the portal vein, the liver, the hepatic vein, the right heart and pulmonary arteries, but we think the rectal way is preferable, for the patient cannot take a dislike to the antiseptic substances on account of their disagreeable odors.

"Gaseous Enemata in the Therapeutics of Respiratory Organs, Pulmonary Phthisis, Asthma, Whooping-cough, Bronchitis, Bronchiectasis, Bronchorrhæa, Pulmonary Catarrh," by M. Cornil. The principle of the action of gaseous infections and of their rapid elimination by the lung has been given by Bernard. He showed that when sulphuretted hydrogen is injected into the rectum of an animal, the gas is expelled by the lungs; he proved that we can so inject it in almost umlimited quantities without causing harm; whereas its introduction by inhalation rapidly occasions grave accidents and the animal's death. However, to introduce sulphureous hydrogen, or gas or any other vapor, into the economy per rectum, for the purpose of destroying the micro-organisms which exist in a number of diseases, it was necessary to find a gaseous vehicle inoffensive to the economy and easily tolerated by the bowel.

Carbonic acid gas admirably answers the purpose; it is very easily borne by the colon, rapidly absorbed, and afterward expelled by the lung, with the medicinal gas which it holds. The gas itself, in all probability, plays a very important part in this new treatment of pulmonary diseases.

Dr. Bergeon, who inaugurated this method, published a few months ago the first results obtained in the treatment of pulmonary phthisis by this method. Physicians of Lyons, Paris, Geneva and Marseilles who have treated phthisis by the method have generally obtained a very rapid disappearance of the phenomena of pulmonary suppuration, and a progress towards a state of health, with all the signs of cure.

Concerning the patients I have treated by this method, I can now assert that the results I predicted three months ago have been achieved. The patients that I considered cured have no more expectoration, and give on auscultation stethoscopic signs which denote the presence of quiescent cavities or cicatrized lesions. Some of these patients have been obliged to return to a life of labor; nevertheless their respiratory organs have stood the test, and the amelioration obtained has been permanent.

While many patients whom the expectoration once so exhausted now have only 3 or 4 grams of sputum a day, at the beginning of the treatment

it was from 250 to 300 grams. We have found bacilli, it is true, in the sputa of these patients; yet it remains to be discovered whether these bacilli which exist after the return to health have kept their functional activity or not. Whatever may be the mode of action of carbonic acid introduced by intestinal absorption in, the venous blood and afterward expelled by the lung, it can be said from the observation of patients that this gas, filled with proper medicinal substances, greatly modifies the respiratory functions, and makes the hemathosis more complete and easy. It gives a sensation of well-being, followed by an increase of strength and weight, a diminution of fever and night sweats.

The following precautions must be observed in giving this treatment:

1. The CO^2 ought to be as pure as possible, so as not to inflame the bowel. That obtained by the reaction of dilute sulphuric acid on the bicarbonate of soda has always been perfectly absorbed by the bowel without producing any toxic effect.

2. The gas should be collected in a receiver from which the air has been expelled.

3. Make the injections just before a meal, or at least three hours after, and never when the patient is weary. It is necessary to be very cautious in experimenting with other medicinal substances, for if, although the sulphuretted hydrogen is inoffensive, other agents, as turpentine, chloral, ammoniæ, iodine, bromæ, ether, etc., may not be, and might be the cause of an inflammation of the intestinal mucous membrane.

It is not necessary that the dose be large; by injecting twice a day 4 or 5 litres of carbonic acid gas passed through 500 grams of sulphur water, we rapidly notice the disappearance of all the phenomena of pulmonary suppuration, either in its acute or chronic state.

Bergeon's method has been successfully experimented with by Dr. Chantamesse, in his service at St. Antoine Hospital, during the months of August, September and October. The following are his results: "Two patients brought to the hospital suffering with violent attacks of asthma were, half an hour after the injection with sulfo-carbon vapor, entirely relieved of the dyspnœa. The treatment having been continued for a few days, the breathing was relieved, and the attacks were not repeated during the time they remained." Nine patients giving general and local signs of pulmonary tuberculosis, with tubercular bacilli in the sputa, have obtained very great amelioration from this treatment. The increase of weight has been rapid, one pound, and sometimes as high as 35 oz. a week; cough and expectoration have largely ceased. We also find the bacilli in the sputum however. These patients have been under treatment for one month and a half. One of them has increased nine pounds in weight.

I have used this treatment with four cases; two of phthisis, one of intussusception of the bowel and one of spasmodic croup. With the croup and intussusception it operated like a charm, overcoming both almost instantly. In the case of croup, I used the bisulphide of carbon, and in half an hour the little patient was sleeping, apparently as well as ever.

Case 1.—Mr. W., aged 26. Two sisters and a brother died of phthisis; he had been treating with various physicians and changing climate (having been to Colorado twice) for over three years. The right lung was nearly useless, as it contained a cavity corresponding to nearly if not quite half of its original capacity. Nowhere on that side could vesicular respiration be heard, while the left apex likewise yielded unmistakable signs of disease. There were œdema of the feet, incessant cough, broken sleep, watery stools and ravenous appetite, although he could not retain anything on the stomach; temperature 102° F. After the first injection of bisculphide of carbon, given in the evening, he slept well for three hours and was bothered very little with cough, but on rising in the morning, to use his own words, came nearly strangling for want of a cough, which be finally got, and expectorated a pint with the one paroxysm. I then used the sulphuretted hydrogen water and he improved very fast; in one week he had a normal temperature; night sweats almost entirely stopped, expectoration was much less, and he was able to wear his shoes, which he had not been able to do for over six weeks. Unfortunately, however, at the latter part of the second week he ventured out in one of our rainiest March days, took cold, and his death, two days later, cut short the record of what might have proven almost a miracle.

Case 3.—Mrs. W., aged 34, widow, having lost her mother and oldest sister from phthisis, applied to me for some heart trouble. Complained of a dizzy sensation on rising from a recumbent position; feet swollen some, hectic flush, considerable dysphnœa, slight cough with no expectoration. *Diagnosis:* Incipient phthisis with heart complication? She had noticed, also, for about a week some night sweats, which did not last, however, after the second administration of gas. She improved so rapidly that she only made seven visits in all, and pronounced herself cured. There is, however, no doubt but she will have a return of symptoms upon the slightest provocation.

This comprises all my experience, but these are facts, and facts are stubborn things to deal with. In regard to the best mineral water, I wish to say that, after trying the Lafayette, Ind., the Blue Lick, Ky., and the Ypsilanti, Michigan, mineral waters, I am satisfied that the Ypsilanti mineral water is just what we want. It contains 20 cubic inches of gas to the gallon, and is so strongly impregnated with it that I use it over the second time by having solid rubber corks to replace the perforated ones when I have got through using the apparatus. Mr. St. Clair, President of the Company has kindly furnished a case of twelve quarts of the water, which I have forwarded to Dr. Bergeon, in hopes that it will compare favorably with the Eaux Bonnes water which he is using. I have also had an apparatus made by E. H. Sargent which I think takes the place of Dr. Morel's very well, differing from it only in point of cheapness, costing but a little more than one-half the former.

The true place of this mode of treatment cannot be established until the experience of careful observers has been given us, years hence. I wish, therefore, to urge the profession to investigate the matter fairly, since time,

I am confident, will prove that Dr. Bergeon has been one of the greatest benefactors of the age.

DISCUSSION.

Following the reading of his paper, DR. CRANE laid before the society a letter from Dr. Bruen, of the Philadelphia Hospital, in which the writer states that the experience thus far obtained in that hospital in the use of Bergeon's treatment of consumption by rectal injections of carbonic acid gas impregnated with sulphuretted hydrogen, has been highly encouraging.

The clinical results indicate that the element of suppuration in pulmonary phthisis has been usually very positively influenced. The night sweats have been controlled in twenty-five cases, without an exception. The temperature has been modified, even in the most advanced cases, and in some instances in which the disease has been extensive it has been brought to a normal point. A peculiarity of the temperature charts seems to be an introduction of a subnormal temperature in the forenoon. The expectoration has been lessened in all instances, and in some has disappeared. A marked impression has been made for the better on the nervous symptoms which attend the disease, and a more cheerful and sanguine spirit has followed the therapeusis. One case of acute broncho-pneumonia, treated on this plan, has recovered, and will be discharged from the hospital. Another case of phthisis with pneumo-thorax, under treatment for five weeks, is so much improved that the patient insists on her discharge. The rales have disappeared from this patient's chest (the pneumo-thorax was local and confined to the lower zone of the right thorax), the opening into the lung has apparently closed, and retraction of the chest wall is going on. This patient had been ill for a year previous to admission to the Philadelphia Hospital; the pneumo-thorax was noted on admission. She has gained over nine pounds of flesh, expectoration has ceased, sweats abolished. The cough, however, continues as a modified symptom, since she is as yet merely a case of phthisis in stage of arrest, the bacilli of tuberculosis being still recognizable in the sputa.

Two cases of commencing phthisis with moist rales, dullness on percussion, harsh breathing, deficient expansion over right upper lobe, and tubercle bacilli in sputa, have recently been placed under the treatment. In these cases in one week the rales have disappeared and the patients express themselves as benefitted.

A solution of 5 grs. sulphide of sodium and 5 grs. chloride of sodium in 22 ounces of water has proven the most satisfactory substance to produce the sulphuretted hydrogen. A solution more strongly impregnated with sulphuretted hydrogen has not only not been advantageous, but seemed injurious, apparently inducing pallor, loss of appetite, and in some cases, irritation of the bowels. The gas should be introduced slowly; not less than half an hour seems requisite for each seance. From three to five quarts can be introduced in most cases, a gain in the tolerance of the necessary distension of the bowel being rapidly acquired. The absorption of the gas from the bowel is very rapid, and in half an hour the distension

will entirely subside. It is sometimes introduced more rapidly, but the gain is in proportion to the time consumed in giving the gas. The carbonic acid can be pumped through the solution containing the sulphuretted hydrogen by the aid of a ball with valve attachment. Dr. Bruen has not obtained as yet satisfactory results from the examination of urine or breath, nor of the effect of the treatment upon the bacillus of tuberculosis.

DR. R. H. BABCOCK said that his experience with this remedy is rather limited, but it seems there are several questions which should be considered in speaking on this subject: First, is the treatment safe? Second, is it applicable in all cases? Third, is it a cure? Practically the treatment is safe under the precautions which are laid down, but Dr. Osler, in some remarks before the Philadelphia County Medical Society, narrates a case in which the patient almost succumbed after the first treatment, the gas being charged with a mixture of bi-sulphide of carbon and sulphuret of hydrogen. We can also conceive of cases in which, on account of limited respiratory power, the rapid administration of the gas, by producing distension of the large bowel, would seriously embarrass the limited respiratory capacity remaining in the patient. It is also conceivable that an undue amount of distension in cases of tubercular ulceration of the bowel might be dangerous, possibly producing rupture and peritonitis; and it seemed to him this is a consideration which should require caution about administering this treatment in typhoid fever. In regard to its applicability in all cases, that has been partially answered in considering the previous question. It has been the experience of Geneva physicians, as reported by M. Wiss, and of De la Roche, of Lyons, that there are cases which cannot tolerate the treatment at all. One patient who had hæmorrhoids suffered from such colic that the treatment had to be abandoned. Wiss also mentions a case in which the treatment had to be abandoned in the course of a month, although superintended by Bergeon himself. He was asked to administer the treatment in a case in which the lungs were so extensively destroyed that it seemed unwise to administer it, though perhaps a small amount of gas might have ameliorated the symptoms; but had it been possible to abate or arrest the disease, the patient could certainly not have lived with such a small amount of lung left. Of course this consideration is one which renders the indiscriminate use of the treatment hazardous. There are cases in which the recovery or arrest of the disease has been so complete that the patients are practically well, and have been able to return to their avocations, However, if we are to estimate this thing by the disappearance of bacilli from the sputum we must say it is not a cure. No case is reported in which bacilli have entirely disappeared. As you knew, M. Cornil has instituted a number of experiments on animals with reference to this question, a solution of which all are looking for with much interest. French physicians are experimenting with a great many other substances.

He is now using the treatment upon two cases; one is bronchitic asthma, but the treatments are too few as yet to make any report. Another case is a lady aged 34, who has been suffering from phthisis for a year and a half,

and who last fall received injections of phenic acid twice daily, without any improvement, who had been taking cabinet treatment for six weeks without improvement, in whom the right lung is extensively consolidated, with a large cavity; in this case the relief for the first week was certainly very surprising. The patient gained in strength and experienced a feeling of well-being, or, as she expressed it, a clearer feeling in her head, a feeling of brightness which she had not experienced in weeks. She certainly coughed less, and expectorated less at a time. Her stools had been clay-colored in spite of everything that could be done; at the end of a week they were of a natural color. The movement of the bowels was perfectly natural, her tongue also cleaned off in a remarkable manner at the end of five days. The treatments were continued twice a day, and the patient had to come into the city, so the improvement was perhaps not quite so great as if she had taken the treatment at home. The second week she did not do quite as well, which was attributed to the quality of the mineral water. At the end of two weeks she was improved in respect to all the symptoms which have been related this evening. The night sweats had ceased; her temperature was lower but not normal—it ranged from 99° to 100⅘°. Her tongue did not remain clean, and her appetite did not improve. She gained strength but there was a complication, namely, tuburcular laryngitis. M. Bergeon states decidedly that tuburcular laryngitis has been very greatly improved by this treatment. In the case just mentioned the laryngeal symptoms have improved, but whether entirely due to the treatment one cannot say, as she has had various sprays and one topical treatment to the larynx Her case is somewhat discouraging, owing to the extent of the disease, since it is not entirely confined to the right lung. She has complalned of no unpleasant symptoms since the first treatment, when she complained of a slight burning at the anus and a desire to evacuate the rectum. Once or twice she complained of a little colic. She is now taking the treatment at home and feels very much encouraged, but the outlook is not what it should be.

All the precautions have been taken in this case thus far, and it proves that the treatment does not give rapid improvement in all cases, and the fact cited by Wiss, that out of four cases treated in Geneva all died within three months, shows that it does not cure in all cases. However, it is a treatment which is so admirable and furnishes such good results in many cases, that all physicians are justified in trying it. Another thing which recommends it is, that after the patient becomes accustomed to the treatment it can be handed over to a trusty member of the family to administer. Compared with pneumatic differentiation it offers a much better chance for the improvement of the patient, although there are cases where pneumatic differentiation will do what this will not. But thus far this method gives better prospects of benefitting a number of cases than any method which has been placed before the profession.

DR. W. H. WEAVER: A case under treatment at the Chicago Policlinic, which is making favorable progress, is one in which there is no doubt of the extent of the tuberculosis in the left upper lobe. The expectoration

was quite profuse and contained an abundance of bacilli. She has been failing for two years, but very rapidly for two months. She had fever, night sweats, prostration, wasting, loss of appetite, but had not taken any medicine of any sort. She came to the Policlinic dispensary for treatment; the first time the injection was only one pint of gas; her temperature that day was 101½; the next day she returned and she had a quart injection and her temperature was then 102⅘; the next day, the third injection, her temperature was normal and she had another quart. When she returned for the fourth injection her temperature was normal and she seemed better in every way; said her appetite had returned, the cough was less severe, expectoration diminished greatly, and the night sweats almost entirely relieved. At the fifth injection she had a slight temperature; she said she had had no more chills and fever for the last three days. He has given it in three other cases; one has some pelvic trouble and the physician who is treating her thinks that might be a counter-indication to the remedy, but she seems to be better in her general condition, has increased in flesh, and prefers to continue the treatment. Another case of incipient tuberculosis, where the upper left apex is affected more particularly, seems to be improved considerably. He has been having the treatment one week.

DR. L. L. MCARTHUR said that in starting in with this treatment of phthisis he saw the difficulties that were going to arise in the apparatus, and thinks he can make some suggestions that will prove valuable. The apparatus presented to-night is not portable, and if the patients are to be treated at home they would either require a separate apparatus for each patient or else one must run the risk of breaking the apparatus. In the first place he thought of a method of collecting the carbonic acid gas, by taking one of those portable laughing-gas cylinders, to be obtained at any dental depot, to a soda-water fountain and having it charged with carbonic acid gas. There can be stored from one to 500 gallons of gas, equally chemically pure with that recommended. This apparatus would simply require the turning of a stop-cock in the tube or opening to permit the gas to escape at any rate desired. If found desirable to continue the use of sulphuretted water, instead of mixing the two gases together first, it could be done by using a wash bottle and a delivery tube. He believes an equally efficient method is to introduce into this cylinder a solution of sulphide of potassium, which furnishes for every ounce of the sulphide of potassium about a gallon of sulphuretted hydrogen. The carbonic acid formed liberates the HS from the sulphide introduced. The strength according to Bergeon's method is about half of 1 per cent. or a little less. By a little calculation it will be seen that the carbonic acid formed by the combination of the carbonic dioxide and water would set free the hydrogen in combination with the sulphur in the definitely desired quantities, so that it would not be necessary to use the sulphuretted water. In that way the gas could be introduced into the measuring bag and then into the rectum. The cylinder would hold a sufficient amount of gas for many treatments, and as it is easily portable, it could be taken to the houses of patients and not require them to come to the office.

DR. R. TILLEY had had no experience whatever in this method of treatment, but would like to say a word with reference to the apparatus which would make the measurement of the gases used more definite. If a bottle of the necessary size was filled full of carbonic acid gas, and then another bottle with a tube attached full of water, the latter could be attached with the necessary tubes and elevated just the same as a siphon, and the water introduced into the bottle containing the carbonic acid gas, and passed through the sulphuretted hydrogen water with the required rapidity, and thus it would come much more regularly than could be done by means of this spasmodic pressure of the bulb. He would like to call attention to the fact that there are on sale in this city large cylinders containing absolutely pure carbonic acid gas, imported under the auspices of the Prussian government. This gas is condensed to the liquid state at the place where it flows from the earth at a great depth, from the natural channels, and it is only a little dearer than that which is manufactured here.

He would like to say a word about the marked indistinctness that has characterized some few of the reports. The way in which bisulphide of carbon and sulphuretted hydrogen were confused and interchanged was perplexing. Both these agents are exceedingly poisonous, and it is well to bear it in mind. He had some experience with the sulphuretted hydrogen some years ago in the laboratory, and it was his experience that the inhalation of a small quantity was attended almost regularly with a crop of boils. In any case, it would be better to have a more definite idea of the quantities of these poisonous agents than can be obtained by the information given us to-night.

DR. WALTER M. FITCH: For generating the gas we use a common Wolf bottle with three corks, one for a stop-cock for the acid, one for the delivery tube, and one for the safety valve. This last must not be pressed in too tightly. To make the gas we use about a heaping tablespoonful of bicarbonate of sodium, covering that with cold water about two inches deep. If we use hot water we make a suds that will foam up and run into the bag. We use the bicarbonate of sodium and sulphuric acid diluted one part in four. The reason for using the sulphuric acid in preference to any other is, that being absolutely non-volatile, none of it will pass over into the bag of carbonic acid gas. To make the gas, the generating bottle is connected with the bag, which is emptied and tightly rolled in order to remove all the air. The generator should also be emptied of air by turning in some of the acid before it is connected with the gas bag. The bags usually hold about one-half of what they are marked—a three-gallon bag will hold about six quarts, etc. If we should over-distend it the corks would be blown out of the generator. For injecting the gas the stop-cock is turned off and the bag is connected with the bubbling tube, which extends to the bottom of the bottle of mineral water, so that the gas coming from the bag may pass down into the water, and, rising up through it, be medicated by the sulphur vapor which it contains. It is injected by means of a hand bulb. In using the bulb it is important to remember that, since it is intended to be used only with water, the action of the valves is not perfect

with gas, and it is therefore necessary that the bulb be held vertically, so that the weight of the valves may assist in closing them. In using it in this way we secure a perfect action, which draws the gas into the bottom of the bottle and delivers it through the tube. The bisulphide of carbon has been mentioned several times. In order to use this it is necessary that the gas be washed, for fear it may contain impurities, for none of the chemicals we get are perfectly pure, and, as they are most likely to contain vapors of hydrocloric acid, which are easily dissolved in water, the gas is bubbled through pure water to purify it. Between the Wolf bottle and the bulb is inserted an ordinary chemical drying tube, a glass tube three-fourths of an inch in diameter, which is drawn down at one end small enough to have the rubber tube slipped over it. Into the other end is fitted a cork with a glass tube through it; in the drying tube is placed a tampon of cotton, and the requisite amount, usually one drachm, of bisulphide of carbon is placed on the cotton. In passing the gas through this cotton it becomes very strongly impregnated with the vapor and is injected in that manner. A very simple way of measuring the gas, when using a small apparatus of this kind, is with the bulb. The bulb will deliver at each compression just so much gas; in order to measure how much is delivered, we simply take a measured bottle, invert it over the water, with the water filling it, then introduce the rectal tube into the bottle and remove the water from it by displacement, the number of compressions being counted. The bulbs vary in size. Of six now in use, two count fifteen compressions to the pint; three count twenty compressions to the pint, and one counts twenty-five. Thus, with each apparatus the bulb must be measured, and knowing its capacity, the gas can be prescribed in as definite a way as any medicine measured out of a bottle.

THE PRESIDENT said his experience with this method, extending over less than a month, comprises the observation of one case that impressed him strongly. This was a young man suffering from the last stages of quick consumption, who had been in the care of Dr. H. A. Johnson. He was very feeble, much emaciated, had badly swollen feet and albuminous urine. His temperature ranged from 101 to 103 each afternoon, and he had profuse night sweats. In addition to these usual symptoms he suffered to an extraordinary degree from laryngeal tuberculosis. He had been unable for many weeks to lie down with comfort, and according to his own statement, had not slept fifteen minutes in three months. Cough was constant and expectoration profuse. About a month before Doctor Johnson had given him three or four weeks to live. Gaseous enemata, employing the artificial solution advised by Doctor Bruen, was used twice a day. Improvement began on the second day, and by the fourth day was pronounced. The cough was less distressing and the sweats and expectoration had diminished; the patient was able to lie down and sleep for two hours continuously. He was, however, so evidently near dissolution that it was deemed inadvisable to continue a tentative treatment, and stopped it on the fourth day. Two days later he sent an urgent request for the resumption of the treatment, saying that his former symptoms were returning

However, he declined to use the injections further, and six days after their discontinuance the patient died, nearly two weeks after his physician had expected his demise.

It should be remembered that these injections seem to arrest not the tuberculosis proper, but the sepsis which is secondary thereto, and that there are numerous other septic conditions in which benefit may fairly be expected, such as surgical sepsis, diphtheria, puerperal fever, etc. The apparatus furnished by the stores is unnecessarily expensive and inconvenient for a visiting practice. He uses an improvised apparatus consisting of a gas bag, double perforated cork, and ordinary large wide mouthed bottle—the whole costing $2.50 instead of $10. The entire outfit can be readily improvised at a little cost and carried in a small handbag.

His limited experience gives him the impression that the artificial solution of the sulphide of potassium is preferable to either Ypsilanti or Blue Lick water, because the amount of sulphuretted hydrogen in these waters as we obtain them at the drug store appears to be extremely variable, while in the artificial solution it can be maintained at a given percentage, increased or diminished as desired, yet care should be taken to make a weak solution about such as is recommended by Doctor Bruen, since a too-concentrated solution of the poison may produce very unpleasant symptoms. This method can be employed by every practitioner as well as by the most expert specialist. If it will accomplish nothing more than the relief of the distressing cough, expectoration, fever and sweats of advanced consumption, it will at least do what can be effected by no other therapeutic measure with which he is acquainted; hence it is to be hoped that it will be submitted to a general test by the profession, that we may quickly ascertain exactly its merits and demerits.

DR. C. M. FITCH: The remedies that have been ordered for consumption in the past are about as numerous as the sure-cures that have been offered for cancer and hydrophobia, and have commanded about as much attention from the profession. But this method of Bergeon's comes to us under very different auspices; it comes with a letter of introduction that demands from us respectful attention. J. Henry Bennett indorses Bergeon as a man worthy of credit; and if Bergeon's statements be true they are of the deepest interest to us all. It is in Bergeon's favor also that he not only asks us to believe something, but he gives us a reason for so believing —a plausible explanation of what he wishes us to receive. He assumes that septicæmia, arising either from the absorption of pus, or the morbid product of the bacilli, is the cause of the formidable symptoms of phthisis, and that if we can antagonize this septicæmia, we can undo day by day the deadly work of the bacilli, and shall gain time in which the lesions that have arisen from phthisis may be overcome.

The first case in which he had occasion to test this method of Bergeon was one of extreme anxiety to him. The patient, a young lady 20 years of age, had previously had exceptionally good health, was well nourished, with a muscular development that seemed to defy fatigue. She returned in July last from a visit to Colorado with a cough which was charged to

the dryness of the climate and the inhalation of the alkaline dust, which causes a catharrhal irritation. This seemed a plausible explanation, and as the cough was not urgent, it received but little attention until, in November, she took a cold which resulted in chills for three or four successive days, and seemed to prostrate her greatly. He then examined her chest, and, to his astonishment, found extensive and marked consolidation at the apex of the left lung; there was also irritation throughout the remainder of the lung and some moist rales. Several of our best physicians tendered their aid, but the case failed to improve. The patient lost flesh rapidly, her cough became fearfully oppressive and her temperature never fell to normal, rarely below 100°, and most of the time 101° and rising to 103°. She had daily chills and profuse night sweats, and the case presented all the features of acute phthisis. At the last examination, made by Doctor Belfield and Doctor Ochsner, both thought they detected bacilli in the sputum, although previous examinations had failed to show them.

Late in January his attention was called to an article in the *Medical Record*, giving a notice of Bennett's paper in the *British Medical Journal*, which contained an account of Bergeon's method. After considerable trouble he obtained a copy of the paper which contained this article, and went to Sargent's to have an apparatus made, and there learned that they had just made one for Dr. Crane, who kindly allowed him to appropriate it and ordered another for himself. Knowing nothing at that time of what he might expect in such a case from our different mineral waters, and knowing that Dr. Bergeon recommended bi-sulphide of carbon as the best substitute, he commenced treatment with the bi-sulphide, and the effect was surprising. The treatment was commenced seven weeks ago to-day; during the week previous the temperature had at no time fallen to normal; the lowest point was 100°, and once it rose to 105½°, and night sweats and chills were constant. The first time the injection was tried very cautiously, only a moderate amount of gas being used. The effect was not specially apparent; the second day the temperature still rose to 103°. That night the gas was used much more freely, and with results that to us were somewhat alarming. The next morning the temperature fell to 95°, and it did not rise above 100° during the day; the cough was almost suppressed, although it had previously been very distressing. The next day we did not use the gas quite so freely, but the day following the lung was almost entirely occluded; the mucus seemed to become viscid, and the air was almost shut out from the lung. There was so little elimination of the bi-sulphide through the lung that we soon began to have marked symptoms of bi-sulphide poisoning, although in many respects she appeared better; the cough was almost gone, and there were no chills. The treatment was discontinued for about ten days, and then resumed with the Ypsilanti mineral water. From that time there has been a satisfactory improvement, and she is better than she has been at any time since her sickness began; her appetite and strength are improved, and she is evidently beginning to gain flesh; her cough is greatly lessened, and the chills have altogether disappeared. Her

night sweats have been absent for six weeks; although during the last warm weather she perspired a little for three or four nights, there was nothing in the nature of colliquative sweating, and she seems now in a fair way to recover.

The second case in which he tried this remedy seemed about as hopeless as well could be; the patient was confined to her bed, had been suffering from severe hæmorrhage, chills, night sweats, and great prostration. There was marked dullness at the apex of the right lung, and the physician who was treating her recognized softening. The husband, whose family were patients of his, after the physician told him that nothing more could be done, came to him. He told him that he did not know that he could do anything more; the only thing he could suggest would be this new treatment which he had been experimenting with, and which might be of some value. He was anxious to have something tried, and the case was undertaken. At the end of four days this patient's chills, which had existed then about a month, ceased entirely, and have not since recurred. On the ninth or tenth day the sweats disappeared; her cough was relieved from the first, no opiate could have controlled it more completely. The expectoration was also lessened, her appetite has improved, and she is gaining in strength. In all respects he thinks she has gained as much in the time she has been under treatment as he ever saw a patient gain under any treatment in the same time.

Another case was a young man of scrofulous habit, who has a stiff knee from scrofulous disease of the joint. He has been under treatment about three weeks. There was marked consolidation in his case, also, at the apex of the right lung, and every indication of phthisis. He has improved materially; his cough is much lessened and he is gaining in strength. The indigestion and flatulence which had previously troubled him very much, has disappeared under the use of the gas; there has also been a great improvement in his appetite.

A fourth case was a young woman of twenty, who came under treatment some two or three weeks ago.

The case was chronic, was not urgent in character, at the same time he thought there was little doubt of its being a true case of phthisis. She gained rapidly from the first, and at the end of ten days her menses, which had been absent since December, returned, and her cough was so nearly cured that she considered herself well, and without consulting her physician discontinued the treatment.

Another case, that of laboring man, large and muscular, who has been working where there is a great deal of dust, probably from mechanical irritation, had contracted trouble with his lungs. He had repeated hæmorrhages, which caused great loss of strength; there was marked though limited dullness at the apex of the right lung, but the chief feature of the case was the marked loss of strength, altogether too great to be accounted for by the lesion in the lung. There seemed to be some torpidity of the liver, and a little proto-iodide of mercury was given. His strength, either rom the gas or stirring up the liver, has very greatly improved.

The other cases he had seen have not been under treatment long enough to justify a report. It seems that we have a remedy that is worthy further trial. Whether it will fulfil the promise of its youth we have yet to see. He had no doubt this remedy will relieve spasmodic asthma, and there are other conditions that it would relieve. In puerperal fever he should try it, using the bi-sulphide of carbon, but using it cautiously. He also thinks it would be of value in malignant diphtheria and typhoid fever.

THE CHICAGO SOCIETY OF OPHTHALMOLOGY AND OTOLOGY.

Meeting of February 8th.—THE PRESIDENT, E. L. HOLMES, M. D., in the chair.

PROFESSOR W. F. COLEMAN read a paper on

THE ADJUSTMENT OF GLASSES IN ERRORS OF REFRACTION.

in cases of simple myopic astigmatism of low degree, in which he said he is "inclined to think it would always be best for near vision to substitute a plus cylinder, with its axis at right angles to that of the minus cylinder found for distances."

He dissents from the view held by Doctor Culbertson as to the manner in which a plus cylinder will correct the ametropia in these cases of simple myopic astigmatism. Doctor Culbertson, in the *American Journal of Ophthalmology*, says: "By this minus glass for distance the myopia in proximal vision has been simply transferred from one to the other plane, and the foci of the two planes are not of the same length." Professor Coleman differs from that view, and cited several cases from his practice in which plus cylinders had been used in accordance with the plan reccommended, in which the results were reported as having been very satisfactory.

In discussing the paper, PROFESSOR E. J. GARDINER stated that he preferred to give the same glass for reading as for distance. He wished the eye to have the normal amount of accommodation, and did not care to give two kinds of glasses—one for distance: a minus cylinder; and one for reading: a plus cylinder. Professor B. Bettman had always prescribed a minus cylinder for reading. After Professor Coleman had mentioned to him the subject of the substitution of a plus cylinder for a minus one he had tried it in four cases, and in two of them the result had not been satisfactory.

PROFESSOR E. L. HOLMES said he had tried the substitution of a plus cylinder for the near-point, and had found the minus cylinder more satisfactory.

DR. H. GRADLE said he had always found a minus cylinder more satisfactory than a plus one. He had frequently noticed that the axis of the cylinder, determined with homatropine, differed from that determined

when the accommodation had recovered, but that the patient always accepted the former in reading.

PROFESSOR GARDINER said he had frequently noticed the patient, in reading, change the axis of the distance cylinder.

PROFESSOR COLEMAN, in reply, said that, in his experience, patients with low degrees of myopic astigmatism did not care to wear glasses for distance.

PROFESSOR E. L. HOLMES presented for inspection a cataract glass, double convex cylindrical, axes at right angle and equivalent to + 12, D. spherical, ground by Meyrowitz Brothers, of New York. He stated that such lenses had been long in use by watch-makers and in the construction of certain optical instruments. His attention was called to the subject more than a year ago by a friend—a distinguished surgeon of New York—upon whom had been performed a successful operation for cataract. The usual glasses, if Professor Holmes remembered correctly, gave perfect satisfaction.

After a secondary operation for capsular remains, the patient found difficulty in adjusting spherical glasses. He then experimented with cylindrical lenses with great satisfaction.

There is reason to believe that this patient is one of the first that ever wore such a combination as being superior to spherical lenses. The patient, after visiting some of the European clinics, was led to believe that few, if any, of the teachers knew by practical experience that such cataract glasses were advantageous to some patients.

Experience must determine whether the slightly less spherical and chromatic aberration and the somewhat enlarged field of the cylindrical lens, such as was here presented, can be of special benefit to cataract patients, and those requiring strong, positive lenses.

PROFESSOR HOLMES also presented a small instrument for incising secondary capsular cataract, in cases in which iridectomy had been performed. The instrument is practically a very narrow Graefe's knife, bent on the flat about half an inch from the point—making a right angle with a square shoulder. The metal portion of the handle is round and small, not unlike that of a cataract needle. The handle of the instrument, in operating, is held in position as in making the corneal incision for extraction of cataract. The point is carried through the periphery of the cornea into the anterior chamber, the plane of the knife being in the plane of the perpendicular meridian of the globe. A slight rotation of the handle carries the cutting edge of the instrument through the opaque capsule. Dr. Holmes had used this instrument in three cases with great success. In a fourth case the very tough membrane was simply torn from its attachments and displaced.

The wound in the cornea produced by the instrument is somewhat larger than that made by a stop needle. There is less violence, however, to the tissues, than in cases in which it is necessary to make extensive motions with the handle of a stop-needle or of Knapp's knife-needle to insure rupture of the membranes. An instrument—right or left—is required for each eye.

PROFESSOR J. E. COLEMAN presented a paper in which he gave the results of his experience in the use of

THE GALVANIC CURRENT OF ELECTRICITY IN THE TREATMENT OF CERTAIN FORMS OF CATARACT

and classed the results into groups.

Group 1. "Cases in which there was no improvement." Group 2. "Cases that have been under observation from four to seven years, in which the improvement has been permanent." Group 3. "Cases in which there has been complete removal of short lines nebulæ." Group 4. "Recent cases in which there has been complete absorption of opacities." He said: If the cataract is due to the disturbance of nutrition or change in vascular supply, and in a large number of cases preceded by a marked disturbance of the general health, is it not fair to suppose that in those cases cited by Bull and others where there is arrested development, delayed maturing, or spontaneous absorption that the cause for the change may lie in the improvement in nutrition? That the remedy fails in certain percentage of the case, or in fact, all the cases under observation, may not be the fault of the remedy but in the selection of the cases to be treated *In all cases where the disease is progressive*, as indicated by the fat granules and nebula, where electricity is well borne, where the choroid and retina are not greatly degenerated, and where there are no complications of cirrhosis of kidneys or liver, diabetes or organic disease of heart or lungs, *improvement may be expected.* The cases in which improvement is not to be expected, are those in which vision has remained stationary for some time, and where there are structural changes in the retina and choroid.

Meeting of February 12th.—THE PRESIDENT, E. L. HOLMES, M.D., in the chair.

PROFESSOR E. L. HOTZ reported

A CASE OF PARTIAL TRICHIASIS RELIEVED BY STELLWAG'S METHOD OF REVERSING AND REPLANTING THE CILIARY BORDER,

in which he said the feasibility of skin-grafting suggested to Professor Stellwag a new way of operating for trichiasis, which he announced in the *Allgemeine Wiener Medicinische Zeitschrift* in 1883. In the operation the border of the lid is split, making "an anterior and a posterior leaf, and a transverse incision parallel to the lid border and four to five millimeters from it, is made from canthus to canthus, but at each canthus the direction of this incision is so changed that there it joins the ends of the first cut by which the lid border has been split. In this way a long and narrow flap is obtained which contains all the eyelashes, this flap is completely dissected off; but instead of being thrown away, as in scalping, it is, after all bleeding of the wound has ceased, put back in its place again but with its edges reversed so that the originally upper edge is now the lower edge and *vice versa.* By this reversion of the flap the direction of the eyelashes is not only thoroughly changed so as to turn them away from the eyeball, but they are also removed a little distance from the edge of

the lid by the interposition of a narrow strip of smooth skin, which serves as a sort of a substitute for the obliterated intermarginal border, and effectually prevents the eyelashes from ever again coming in contact with the cornea.

The operation had not always been successful in the hands of Professor Stellwag. If unsuccessful the hair bulbs may be destroyed and the eyelashes be lost, or the transplantation may be followed by the death of the transplanted part; in which case the operation would practically be the old operation of "scalping."

CLINICAL REPORTS.

APHASIA.

A CLINICAL LECTURE BY PROFESSOR J. A. ROBISON, DELIVERED AT COOK COUNTY HOSPITAL.

[Reported by J. L. Gray, M. D.]

The cases to which I wish to call your attention are in some respects unique. The first is that of a man aged 25, a clerk by occupation, who was admitted to the hospital March 11th, 1887. At the time of admission he was unconscious. There was paralysis of the right arm, the right lower extremity and *right*-sided facial paralysis. The pupils did not respond to light. In the course of 48 hours his consciousness returned, and while he could understand all questions that were asked, he was unable to speak, and of course unable to write, on account of the paralysis of the right arm. In a few days, however, he was able to write, using his left hand. All symptoms of paralysis in the lower extremity disappeared in 48 hours after admission. The facial paralysis disappeared in five days, but the paralysis of the right arm continues to the present time.

Three days after admission he was able to say "yes" and "no," His power of speech has gradually improved until at the present time he can speak with sufficient distinctness to make himself understood, after several attempts. For example, when he says "very good" the consonant "v" is "b," and "good" is "gut," sounding like "bery gut." When he says "thin" it is "hin." There has been at no time since his return to consciousness, any amnesic aphasia; it has been

purely ataxic, this inability to speak certain words, although comprehending them perfectly. This patient previously had excellent health, although he has been a hard drinker, and his present disorders were probably caused by a protracted spree, but he has no recollection of how it commenced. He was found on the street, taken to the station and then brought to the hospital. In my own mind I have localized the lesion in the left frontal convolution. Although the patient is a young man, in all probability he had a small cerebral hemorrhage and at the same time areas of active congestion, giving rise to temporary paralysis.

The treatment has been complete rest in bed, good nourishment and no medicine whatever until yesterday, when he commenced taking 8 grains of potassium iodide and 15 minims of ergot three times daily.

The next patient is H. W., aged 25, a commercial traveler, and a very fine penman. Eleven months ago he had a chancre which was followed by the regular specific symptoms of sore throat, fever, eruption, etc., and he was placed on the mercurial treatment for syphilis.

March 1st, while attending to his business as a commercial traveler, he had "a stroke of paralysis" in which there was paralysis of the right side of the face, right arm and complete loss of power of speech. This was at first attended with unconsciousness, which, however, speedily passed away, and in the course of ten days the paralysis of the right arm also disappeared. At present there is slight paresis of the right facial muscles. His memory and mental faculties are unimpaired with the exception that he can not read as intelligently as before. When reading there are certain words which de does not seem to comprehend, and the type seems indistinct and blurred.

After the symptoms of paralysis of the right arm had disappeared he attempted to write, and although he was a very fine penman before the attack, it is with difficulty he can write his name, now. When he is requested to write any other words except his name he is unable to do so. He can write anything on the black-board, slowly, but cannot use a pencil.

The only words which he is able to articulate are "yes" and "no." In trying to speak he is very earnest, but in the endeavor to make himself understood, repeats frequently "I say," the sound being "I shay." He comprehends very distinctly everything that is said to him. The vowel A he can not articulate without joining it with a consonant. O and I he can articulate. The other vowels he can not. S, N and Sh are the only consonants he can articulate.

His treatment has been inunctions of the oleate of mercury until symptoms of ptyalism were produced, and internally the iodide of potassium. He seems to be in perfect health with the exception that he is unable to talk. He now has as much power in the right hand as he ever had. I shall try the effect of the same principles of education with this case as are employed with children, thus endeavoring to again place him where he will be able to write and talk.

I wish now to call attention to the case of a man about 27 years of age, who was brought into the hospital unconscious. There was spastic paralysis of the right arm and right lower extremity. There were also greatly exaggerated tendon reflexes, especially of the right side. His consciousness gradually returned in a few hours. When asked his name he was unable to give it, but wrote it on a piece of paper. We were unable to get any history whatever. In a few days he commenced to speak, and with the exception of dropping out a few words, would articulate a complete sentence rather dis-

tinctly. The trouble with his right arm and right lower extremity gradually disappeared, and in a week he could give a complete history of his life, and among other things, a clear history of his having had syphilis was obtained. In ten days from the time of admission he left the hospital apparently cured.

In conclusion, gentlemen, I wish to remind you that you will not often see, either in hospital or private practice, three cases of ataxic aphasia all at about the same time, and all due to cerebral hemorrhage, syphilis being an important factor in two of the cases.

CANCER OF THE TESTICLE AND EFFUSION IN THE LEFT PLEURAL CAVITY.

BY PROFESSOR J. A. ROBINSON.

[A Clinical Lecture delivered in Cook County Hospital, May 24th, 1887.]

This patient, a male, æt. 24, Frenchman, was admitted to the hospital four weeks ago on account of a scrotal tumor. At that time he was advised to have it removed, but refused, and in dread of an operation left the hospital. Day before yesterday he was again admitted on account of symptoms of disease elsewhere. You will notice the scrotum is so much enlarged as almost to hide from view the penis. You will also observe that the tumor is hard, the skin is of a purplish color and large veins course through the skin. This tumor commenced, according to the statement of the patient, eleven months ago with a swollen left testicle. It is undoubtedly of the testicle,

Observing the patient closely we see he has a cachectic appearance, is emaciated, and has great dyspnœa. On

inspecting the chest we see that there is loss of motion of the left side, bulging out and effacement of the intercostal depressions, displacement of the heart to the right edge of of the sternum, and all the other signs to indicate a large effusion in the pleural cavity. The patient gives no history of pain in this side, but says he has suffered from increasing difficulty of breathing for the last three weeks. Let us inquire what will probably prove to be the character of this effusion? I believe we have good reason to anticipate that upon withdrawing some fluid we will find it to be serum, containing blood. Having now withdrawn some fluid by means of this hypodermic syringe, you see it is blood-red. This is, I think, positive proof that the effusion is due to cancer of the pleura. Cancer of the pleura is almost always secondary, and this is undoubtedly consequent upon the cancer existing in the testicle.

The patient is suffering extremely, and will be aspirated this afternoon.

In all cases where the effusion is so extensive as this, aspiration must be resorted to at once. Of course, aspiration is done in this case only for the purpose of affording temporary relief. We must pause before giving our prognosis, as it would not be considerate to discuss it in the presence of the patient, for we must remember how futile all efforts to combat cancer are. Medical science has made wonderful advancements in the treatment of disease during the last half century, but two implacable foes still face us—cancer and phthisis.

EXTRACTS.

HONORS TO A WORTHY PRACTITIONER.

PROFESSOR J. A. ROBISON writes: "I have just received the *Echo de Perse* from Teheran, Persia. It is published in French; and, among other things, contains the following:

'"We learn with great pleasure that by imperial firman His Majesty, the Shahinshah, has authorized the American missionaries to establish at Teheran a hospital, where, without regard to religion or nationality, all seeking relief shall be received for treatment.

"'Dr. W. W. Torrence, physician to the mission, has been appointed director of this establishment. His Imperial Majesty desiring at the same time to reward the zeal and devotion of Dr. Torrence, who for many years has been gratuitously relieving so much suffering and distress, has named him Grand Officer of the Order of the Lion and Sun of Persia.'

"Dr. Torrence's many friends will be gratified to hear of this high mark of distinction having been accorded him.

"Dr. Torrence was educated in Chicago, at Rush Medical College, graduating in 1880, and going to Persia in 1881. He has been laboring many years to establish a hospital there, but has had to contend against difficulties in raising funds."

ELECTRICITY IN THE TREATMENT OF EPILEPSY.

Dr. A. D. Rockwell, of New York, recently read a very interesting paper before the Academy of Medicine of that city

on this interesting subject. The following were the conclusions at which he arrived:

1. Electricity possesses a certain value in the treatment of epilepsy. It is not known, nor is it alleged, that used alone it can cure epilepsy. Used in connection with the bromides, however, its value is unmistakable, and under its use a certain proportion of patients will recover that otherwise would fail to do so.

2. It is in the nocturnal variety of epilepsy more especially that the good effects of electricity are seen, although day attacks have been successfully controlled.

3. The methods of electrical treatment that have proved most efficacious in my hands are central galvanization and general faradization.

4. When electricity fails to cure, or aid in the cure, it is often efficacious, by the method of general faradization, in affording grateful relief from nervous symptoms of an indefinable subjective character; in other words, from that general instability of the nervous system recognized under the term neurasthenia.

5. The systematic use of electricity renders the system more tolerant of the bromides, and will diminish bromic acue.

6. It is important that electrical treatment should be administered with care and judgment; especially should all interruptions of the current be avoided in central galvanization, as the resultant shock is liable to hasten rather than prevent an attack.

7. Two years must elapse without an attack before any case of epilepsy can be considered as one of positive cure.—*College and Clinical Record.*

BOOK REVIEWS.

OUTLINES OF THE PATHOLOGY AND TREATMENT OF SYPHILIS AND ALLIED VENEREAL DISEASES. *By* HERMANN VON ZEISSLL, M.D., *Late Professor at the Imperial-Royal University of Vienna. Second Edition, revised by* MAXIMILIAN VON ZEISSLL, M.D., PRIVAT-DOCENT, *etc. Authorized edition translated with notes by* H. RAPHAEL, M.D., *Attending Physician for Diseases of the Genito-Urinary Organs, etc. New York:* D. APPLETON & CO. *1886. Pp. 402.*

Zeissll's treatise has been so long known and so deservedly well received in its original dress, that an English translation is welcome at once as a valuable addition to the literature of syphilis and allied venereal diseases, in our own tongue. In the present case it may be said that Dr. Raphael has done his work of translation with care and intelligence, and the result is a treatise in the vernacular, and not a clumsy bundling of the author's ideas from one language to another.

It is to be regretted that the revision of the whole, since the appearance of the second edition in 1884, had not rather more fully brought the subject in all its branches up to the date of the translation, though Dr. Raphael's notes supplement this work to a certain extent. For example, in the matter of the gonococcus, which many hold to be the etiological factor in the production of all forms of true gonorrhœa, the present work devotes but a paragraph or two, evidently added by the translator, to the discoveries of Neisser, and the briefest allusion to Bumm's work. In the chapters devoted to consideration of syphilis, the translator has also added a couple of paragraphs merely, devoted to the consideration of the bacilli which Lustgarten and Doutrelepont have regarded as the essential elements of the syphilitic virus. It is here stated that it is "probable that these bacilli actually constitute the syphilitic poison," but one would scarcely conclude from this brief notice that the whole pathology of syphilis is undergoing at the hands of some authors a revision on the basis of what has been written in this connection.

It certainly is well, however, for the practical value of the translation that it has been done by an American. Almost every page bears some fruit of the practical efforts of the American school in the direction of affording the promptest relief to patients actually suffering from the disorders discussed. The conspicuous absence of hints of this character in many German treatises has made the latter unpopular with American readers. For example, there is scarcely a clear distinction made by the German authors between acute and chronic prostatitis, a defect which the

translator endeavors to cure by a hint; and, in the treatment of the first-named complication of a blenorrhagia, the application of leeches to the perineum is actually relegated to one of the translator's notes. There are few American practitioners who would, in an acute prostatitis threatening abscess, tie a Nelaton catheter in the urethra, "in order to keep open the canal for the passage of urine," yet this is the first injunction of the German authors for the relief of the most distressing complication of this disorder. However, we can make allowance for a few such minor faults in estimating at its real value the conservative method in which the authors view many methods of treatment and surgical procedures in the disorders of which they treat, that it is easy to see in the course of a few years will be regarded as relics of the brutal period of genito-urinary surgery.

The book is recommended to the American profession as a trustworthy guide in the management of the diseases in the field in which it has so long and so well occupied a high rank.

DRUG ERUPTIONS: A CLINICAL STUDY OF THE EFFECT OF DRUGS UPON THE SKIN. *By* PRINCE A. MORROW, A.M., M.D., *Clinical Professor of Venereal Diseases, formerly Clinical Lecturer on Dermatology in the University of the City of New York, etc. New York:* WM. WOOD & CO. 1887. *Pp. 199.*

This is a little work of more value than many would suppose from its modest title. It gives in a convenient form the pathological results, so far as regards the skin, of both the ingestion and external application of medicamentous substances. The number of the latter is not only greater than most persons suppose who have given no attention to the subject, but the effects produced are so multiform and numerous that actually a large field in dermatology is covered by the subject. It is one naturally that chiefly concerns the dermatologist; but there is no man who aims to be an expert consultant in general medicine, or a careful diagnostician in any department of it, who can afford to ignore the important details here presented. As we look over the list of drugs capable of producing rashes, from arsenic and the potassium iodide that have been swallowed, to arnica and tar that have been externally applied, we can only look back with wonder as we speculate on the kind of diagnosis that our fathers in medicine would have made when confronted with the rashes that owe to these causes their sole existence.

Perhaps we might, with Tilden, take issue with our author in explaining, as he does, so many of these phenomena by supposing that they have a tropho-neurotic origin. We might claim for some of them that they had an intimate relation with vascular changes, and that some might be actually induced by the presence of toxic or irritative substances in the circulation. But we do not wish to be critical when such excellent results are spread before us.

We prefer, rather, to commend the work to the practitioner, not on the basis of so many others, as a book to be picked up and read during a

spare half-hour. Not at all. It is a volume to be placed on the shelves for consultation; and in the face of an exceptional, singular or curious exanthem, it should be the first consulted.

ELEMENTARY MICROSCOPICAL TECHNOLOGY. A MANUAL FOR STUDENTS OF MICROSCOPY. IN THREE PARTS. PART I, *By* FRANK L. JAMES, PH. D., M.D., *Illustrated, pp. 107.* ST. LOUIS MEDICAL AND SURGICAL JOURNAL COMPANY, 1887.

The author has endeavored to make his description of the steps of preparing tissue and mounting a slide so complete that a beginner using this book, will require no other information. It attempts nothing more.

It contains many good suggestions but deals largely with biological microscopical technology, and is far less useful for medical students than other books previously published. The literary quality of the book can scarcely be commended.

MEDICAL ELECTRICITY: A PRACTICAL TREATISE ON THE APPLICATION OF ELECTRICITY TO MEDICINE AND SURGERY. *By* ROBERTS BARTHOLOW, A.M., M.D., LL.D. *Third Edition, Enlarged and Improved. Illustrated, pp.* xx *and 304. Philadelphia*: LEA BROTHERS & COMPANY. *Chicago:* A. C. MCCLURG & COMPANY, 1887.

Those who are already familliar with this book need only to know that the additions embodied in this edition are highly practical and occur chiefly in the therepeutical sections, bringing the work fully up to the present, to the standard of our knowledge of the subject. Quite a full account is given of appliances for electrical illumination, and galvano-cautery, and galvano-faradization and electric baths receive appropriate consideration. To those who are not already familiar with the book in its former editions, it may be said, that for medicinal purposes it is amply full, and is characterized throughout by practical good sense and directness.

TRANSACTIONS OF THE ASSOCIATION OF AMERICAN PHYSICIANS. *Volume I. Pp 261, 1886.*

Many members of the American Medical Association regret very much indeed that the gentlemen who compose this new association have seen fit to organize what has been considered a society in opposition to the parent association. Many of the papers are of more than usual merit. In addition to the papers read at the meeting, the volume contains a copy of the Constitution and By-Laws, and lists of the officers and members of the association. The meetings are to occur annually, and to be held during the month of June in the city of Washington. The active membership is limited to one hundred, and just why it should be called THE Association of American Physicians is not apparent to everyone.

A PRACTICAL TREATISE ON OBSTETRICS. *Vol. I. (4 vols.), Anatomy of the Internal and External Genitals, Physiological Phenomena (Menstruation and Fecundation.)* By A. CHARPENTIER, M.D., *Paris. Illustrated with lithographic plates and wood engravings. This is also Vol. I. of the "Cyclopædia of Obstetrics and Gynæcology" (12 vols.), issued monthly during 1887. New York:* WILLIAM WOOD & COMPANY. *Chicago:* W. T. KEENER.

The publishers are to be congratulated upon their abandonment of a policy which compelled the purchase of books which in many cases were not wanted, in order to obtain others which were desired. Every volume of this series promises to be desirable, and the enterprise which secures the publication of the "*Cyclopædia*" merits commendation.

Anything like a critical review by topics, of even only a part of Charpentier's work on obstetrics, which this volume is, is of course not to be attempted in the limits of a mere book notice, and hence general statements must suffice.

This translation is made under the supervision of, and edited by, Egbert H. Grandin, M.D., and both duties have been well performed. The section in embryology in the original treatise has been replaced by a condensation of the contribution on that subject by Professor Milnes Marshall to Barnes' treatise on obstetrics.

In the many points in which either general opinion has changed since the original treatise was written (1882), or in which Charpentier's views conflict with those generally held in America, the editor has added, in brackets, the necessary statements. This has been done in a very satisfactory manner, as, for instance, the correction on pages 453 and 454, of the author's gross misrepresentation of Credé's method of delivering the placenta.

The colored lithographic plates are quite satisfactory, but the very numerous wood-cuts are poor in every way, and particularly in the explanatory letters about the margin of the cut, which are in a great many cases illegible. The low price of the books in the series is not a sufficient excuse for this fault, which is a grave one, and which ought to be corrected in subsequent editions. The printing and binding of this volume are very fair, and the size is very convenient. E. W.

ON FEVERS: THEIR HISTORY, ETIOLOGY, DIAGNOSIS, PROGNOSIS, AND TREATMENT. *By* ALEXANDER COLLIE, M.D. (*Aberd.*), R. C. P. (*London*), *Medical Superintendent of the Eastern Hospitals. Pp. viii. and 288, 8 vo., with colored plates. Philadelphia:* P. BLAKISTON, SON & CO. *Chicago:* W. T. KEENER, *1887.*

In his modest preface of eight lines, the author says, "The observations contained in this volume—Relapsing Fever, Rotheln and Influenza excepted—are for the most part founded upon over 21,000 cases which the author has personally treated from commencement to termination.

This little book can hardly be praised too highly. Chapter II, "On

the treatment generally of acute infectious disease" is admirable. In common with all observers of very large experience, an experience involving thousands of cases, the author has learned that the use of drugs plays a very subordinate rôle in the treatment of acute infectious diseases.

The limits of a brief book-notice do not allow extended comment, but it is due this little volume to say that its perusal will well repay any medical man, for its quality and value are exceptionally high. E. W.

A PRACTICAL TREATISE ON OBSTETRICS. *Vol. II, The Pathology of Pregnancy, and Vol. III, The Pathology of Labor, By* A. CHARPENTIER, M.D., *Paris, Illustrated with lithographic and wood engravings. These are Vols. II and III of "The Cyclopædia of Obstetrics and Gynæcology"—1887. New York:* WILLIAM WOOD & CO., *Chicago*: W. T. KEENER.

The first volume of this treatise has already been reviewed in this journal, and these volumes call for no special notice. The claim of the translator, that it is "the most complete treatise on obstetrics in any language," is fully sustained. The translator's notes continue to be a desirable addition to the work. E. W.

A TREATISE ON DISEASES OF THE SKIN, WITH SPECIAL REFERENCE TO THEIR DIAGNOSIS AND TREATMENT. *By* T. M'CALL ANDERSON, M.D., *with colored plates and other illustrations. Pp. xviii and 662, Philadelphia:* P. BLAKISTON, SON & CO., *Chicago:* W. T. KEENER, *1887.*

This volume is a welcome addition to the not over large list of treatises on its subject. For more than a quarter of a century the author has had exceptional opportunities for the study of skin diseases, and he has an added advantage, as an author, in the fact that he is also a general practitioner and holds the chair of clinical medicine in the university of Glasgow.

Many of the articles upon diseases not endemic in England, or upon others, as ulcers, upon which the author is not as well qualified to write, are written by able men whose residence abroad, or whose special experience in practice specially fits them for the work. The pathology and treatments given are thoroughly in accord with the most recent and accepted opinions. The arrangement of topics, the indices, the printing, paper and binding are all excellent. The book may fairly be said to be the most satisfactory English treatise upon the subject. E. W.

A TEXT-BOOK OF PATHOLOGICAL ANATOMY AND PATHOGENESIS. *By* ERNEST ZIEGLER. *Translated and edited for English students by* DONALD MACALISTER, *Part II., Special Pathology, Sections ix–xii. London and New York:* MCMILLAN & CO., *Chicago:* W. T. KEENER.

The volume in hand is devoted to the consideration of the anatomico-pathological changes together with the causes producing them in the urinary organs, the respiratory organs, and in the central and peripheral nervous systems. It furnishes the portion, Special Pathology, which, with Part I on General Pathology, completes the work. Together they cover

the whole field of Pathology. The generally accepted views at the present time are briefly and clearly stated. Besides the text there are numerous explanatory and supplementary notes setting forth the differing opinions upon the subjects treated of. The value of the work as a hand-book, as well as a text-book, is also greatly enhanced by extensive bibliographical references. The arrangement of the matter in paragraphs with the subjects in heavy faced type adds very much to the convenience in using the book. The publishers' imprint is sufficient guarantee for its typographical excellence.

PAMPHLETS RECEIVED.

A Successful Case of Partial Excision of the Larynx on account of Intra-Larnyngeal Epithelioma. By Lennox Browne, F. R. C. S. [Ed.]

A Discussion of the Climatic Treatment of Phthisis Pulmonalis. By Joseph P. Ross, A. M., M. D.

Novel Method of Treating Diseases of the Middle Ear. By Seth H. Bishop., M. D.

Surgical Lesions of the Brain and its Envelopes. By Nicholas Senn M. D.

Hydrophobia—Fatal Termination. By H. P. Stebbings, M. D.

A Contribution to the Management of General Atrophy (Sclerosis?) of the Conducting Apparatus of the Ear. By S. O. Richey, M. D.

Persistent Pain after Abdominal Section. By James B. Hunter, M. D.

The Scientific Rationale of Electro-therapy. By C. H. Hughes, M. D.

Post-Graduate Instruction in Gynæcology. By Henry C. Coe, M. D., M. R. C. S.

Ueber das Vorkommen der Albuminuria bei Diabetes Mellitus. Von Dr. Arnold Pollatschek.

A Novel System of Operating for the Correction of the Deflected Septum. By William C. Jarvis, M. D.

Forensic Surgery. William Zuppan versus William Dickinson, M. D.

Baked Beans; A Serio-Humorous Medical Paper. By Ephraim Cutler, A. M., M. D.

Will Contests. By Walter E. Rex, Esq.

Live-Birth in Its Medico-Legal Relations. By John J. Reese, M. D.

BOOKS RECEIVED.

Report of the Committee on Disinfectants of the American Public Health Association. 1886.

Proceedings and Addresses at a Sanitary Convention held at Coldwater, Michigan, Sept. 9th and 10th, 1886.

A Compend of Electricity and Its Medical and Surgical Uses. By Charles F. Mason, M.D.

A Treatise on Diseases of the Skin. By T. M'Call Anderson, M.D.

A Manual of Weights and Measures, Etc. By Oscar Oldberg, Pharm. D.

The Pathology of Pregnancy. Vol. II. of a *Practical Treatise on Obstetrics*, By A. Charpentier, M.D.; and *The Pathology of Labor*, Vol. III. of same Treatise. Both volumes number in the *Cyclopædia of Obstetrics and Gynæcology.*

The Nursing and Care of the Nervous and Insane. By Charles K. Mills, M.D.

Drug Eruptions, a Clinical Study, Etc. By Prince A. Morrow, A.M., M.D.

Reference Handbook of the Medical Sciences. Vol. IV.

A Text-book of Pathological Anatomy and Pathogenesis. By Prof. Ernst Ziegler.

A Companion to the United States Pharmacopœia, Second Revised Edition. By Oscar Oldberg, Pharm. D., and Otto A. Wall, M.D., Ph. G.

Earth as a Topical Application in Surgery. By Addinell Hewson, M.D.

Elements of Physiological Psychology. By Prof. George T. Ladd (Yale).

The Practitioner's Handbook of Treatment. By J. Milner Fothergill, M.D.

Medical Electricity, Etc.; Third Edition, etc. By Robert Bartholow, A.M., M.D., LL.D.

A Practical Treatise on Impotence, Sterility, and Allied Disorders of the Male Sexual Organs. By Samuel W. Gross, A.M., M.D., LL.D.

Saint Bartholomew's Hospital Reports. Vol. XXII.

Report of the Commissioners of Education for the Year 1884–5.